## CONCEPTUAL STUDY OF ARTICULATED STABLE OCEAN PLATFORM

# FINAL REPORT PART II (VOLUME II)

CONTRACT NO. N00167-95-C-0113 CDRL SEQUENCE NO. G005

PREPARED FOR

CARDEROCK DIVISION
NAVAL SURFACE WARFARE CENTER

DITIC QUALITY INSPECTED &

Prepared by

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MEH Project 44271

May 6, 1997

DISTRIBUTION STATEMENT A

Approved for public release;
Distribution Unlimited

19970605 142

### UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT D	REPORT DOCUMENTATION PAGE								
1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED		1b. RESTRICTIVE MARKINGS None							
2a. SECURITY CLASSIFICATION AUTHORITY			/ AVAILABILITY OF	REPORT					
2b. DECLASSIFICATION / DOWNGRADING SCHED	DULE	Approved for pu	blic release; distri	bution is	unlimited.				
		5 MONITORING S	DOANIZATION DE	DODT NUI	MDED(S)				
4. PERFORMING ORGANIZATION REPORT NUMBER	ER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)							
MEH Project 44271		CD/NSWC MSSPO (102) CR-96/03  7a. NAME OF MONITORING ORGANIZATION							
6a. NAME OF PERFORMING ORGANIZATION	6b. OFFICE SYMBOL (if applicable)	7a. NAME OF MON	IITORING ORGANI	ZATION					
McDermott Engineering Houston LLC		Naval Surface W	arfare Center, Ca	rderock l	Division				
6c. ADDRESS (City, State, and ZIP Code)		7b. ADDRESS (City	y, State, and ZIP Cod	de)					
801 North Eldridge Street		9500 MacArthur	Boulevard						
Houston, TX 77079			MD 20817-5700						
8a. NAME OF FUNDING / SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (if applicable)	9. PROCUREMEN	T INSTRUMENT IDI	ENTIFICAT	TION NUMBER				
Defense Advanced Research Projects Agency	TTO	Contract N0016							
8c. ADDRESS (City, State, and ZIP Code)			UNDING NUMBER	S TASK	WORK UNIT				
3701 North Fairfax Drive		PROGRAM ELEMENT NO.	NO.	NO.	ACCESSION NO.				
Arlington, VA 22203-1714		9750400							
11. TITLE (Include Security Classification)									
(U) Conceptual Study of Articulated Stable	Ocean Platform								
12. PERSONAL AUTHOR(S)									
Trevor R.J. Mills and Zhihuang (Alex) Ran	OVEDED	14. DATE OF REPO	DT Mars Marth F	) 14E	PAGE COUNT				
13a. TYPE OF REPORT 13b. TIME C Final FROM_10	0/29/95 TO 11/27/96	1	September 25	<i>ay)</i>   15.	PAGE COUNT				
16. SUPPLEMENTARY NOTATION				···					
Final Report - Part 2 in 4 Volumes: OMB-95	214 1 through OMB	05 214.4 Model	Studies of Articul	ated Stah	ale Ocean Platform				
17. COSATI CODES	18. SUBJECT TERMS (C	Continue on reverse if	necessary and iden	tify by bloc	k number)				
FIELD GROUP SUB-GROUP					•				
	articulated stable ocea	n mlotform ASO	D. floating produc	stion off	chare ail starage				
19. ABSTRACT (Continue on reverse if necessary and		iii piatioriii, ASO	r, moating produc	tion, on	shore on storage				
		a navy concept of a	floating storage	nlatform	the Articulated				
A conceptual study has been completed to eva	iluate the leasibility of	a new concept of a	a moating storage	ргацоги	- the Articulated				
Stable Ocean Platform (ASOP). The unique	aspects of the ASOP is	the articulation of	the stabilize buo	ys which	were introduced for				
the purposes of reducing wave load and overa	all vessel motion. The	ASOP was designed	ed to have a fuel s	torage ca	pability of 1 million				
barrels and to support a topside up to 12,000	kips in total weight. 7	The fuel storage ta	nks were designed	in such	a way that the draft				
of the platform would remain unchanged at a	ny loading condition w	rithout adjusting th	ne ballast. This g	reatly sim	plified the operations				
and allowed the platform to continue other ac	ctivities while loading a	and off-loading.							
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT		121, ABSTRACT SE	CURITY CLASSIFIC	CATION					
✓ UNCLASSIFIED/UNLIMITED ☐ SAME AS R	PT.   DTIC USERS	UNCLASSIFIE							
22a. NAME OF RESPONSIBLE INDIVIDUAL			(Include Area Code)	22c. OF	FICE SYMBOL				
Keith R. McAllister		(301) 2	227-5430	10015161	NSWCCD 293				

DD Form 1473, JUN 86

Previous editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE

UNCLASSIFIED

#### **REPORT DOCUMENTATION PAGE 2**

The study shows that the ASOP has adequate stability and satisfies the stability requirement of the certifying authorities. Both numerical analysis and model test showed that the ASOP offers exceptional motion response characteristics in all its degrees of freedom. In terms of platform motion response, the ASOP is capable of operating in more severe weather conditions than a conventional surface vessel type platform. A seven body (six buoys and the hull) coupled motion analysis in ocean environment was performed and results in general agreed with the model test. However, both numerical analysis and model tests showed that the articulated buoys have no clear advantage over fixed buoys in the global motion of the ASOP. The reduction of forces by using articulation did not significantly improve the motion of the platform. Furthermore, the analysis and model test showed that compared to the fixed buoy case, using articulations increased the slow drift motions of the ASOP in random waves. The study also indicated that the introduction of articulations complicated the hydrostatic stability of the platform. Damaged stability was the governing factor in determination of the size of the articulated buoys. In conclusion, this conceptual study indicated that the fuel storage ASOP is a viable concept. Its large storage capability and exceptional motion characteristics allow many applications both in civil and military purpose.

# MODEL STUDIES OF ARTICULATED STABLE OCEAN PLATFORM

**VOLUME II** 

**JUNE 1996** 

#### PREPARED FOR

McDERMOTT ENGINEERING HOUSTON 801 N. ELDRIDGE STREET HOUSTON, TEXAS 77218

PREPARED BY

OFFSHORE MODEL BASIN 578 ENTERPRISE STREET ESCONDIDO, CALIFORNIA 92029

### APPENDIX F FILTERED STATISTICS

RESPONSE	SUMMARY	, File:	111.CS	v 02-	28-1996		
Tosponse Component	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
esponse Component ave Elevation (ft)	0.24	2.90	6.70	-5.95	11.04	-10.56	Fr(Hz)
		0 20	0.74	-0.47	1.20	-1.02	
Pitch (deg) Total Low Freq	0.09	0.30		-0.47	1.15	-0.97	<.0300
Low Freq	0.09	0.29	0.70			-0.32	>.0300
High Freq	0.00	0.08	0.22	-0.22	0.32	-0.32	<b>&gt;.0300</b>
t Heave (ft) Total	1.03	0.70	2.51	-1.25	3.63	-1.58	
Low Freq	1.03	0.68	2.62	-0.50	3.54	-1.49	<.0300
High Freq	0.00	0.19	0.51	-0.96	0.69	-0.69	>.0300
1	-2.15	1.88	0.94	-4.85	4.86	-9.16	
= C Durge (10)	-2.15 -2.15	1.87	0.71	-4.70	4.82	-9.12	<.0300
Low Freq		0.19	0.59	-0.77	0.70	-0.70	>.0300
High Freq	0.00	0.19	0.37	0.77	0.70	0	
ML-1 (kips) Total	189.42	13.14	216.37	165.08	238.29	140.55	
1111 1 (1116)	189.42		212.57	167.46	236.65	142.18	<.0300
High Freq	0.00	3.37	12.42	-14.61	12.53	-12.53	>.0300
						010 00	
ML-2 (kips) Total	241.45		256.31	226.59	269.59	213.30	
Low Freq	241.45		256.47	229.35	269.02	213.87	<.0300
	0.00	1.51	3.94	<b>-</b> 5.76	5.63	-5.63	>.0300
pm 1 /hina: Motal	-16.89	84.18	192.16	-201.05	296.25	-330.03	
1 1 (12PC)	-16.89	54.83		-118.14	187.08	-220.86	<.0300
				-122.94	237.60	-237.60	>.0300
High Freq	-0.00	03.07	110.02	100.71			
T-2 (kips) Total	-13.16	43.79	108.34	-119.94	149.76	-176.07	
( · · · · · · · · · · · · · · · · ·	-13.16		49.08	-82.80	103.06	-129.38	<.0300
High Freq	-0.00	30.69	63.70	-59.07	114.17	-114.17	>.0300
night fred	0.00	2					

RESPONSE SUMMARY, File: 112.CSV 02-28-1996

Response Component vave Elevation (ft)	Mean 0.36	Std dev 7.50	Max 11.82	Min -12.71	1/1000+ 28.26	1/1000- -27.53	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-0.15 -0.15 -0.00	0.97 0.11 0.97	1.37 0.04 1.40	-1.76 -0.45 -1.51	3.48 0.25 3.60	-3.77 -0.54 -3.60	<.0300 >.0300
t Heave (ft) Total Low Freq High Freq	1.67 1.67 -0.00	2.17 0.53 2.10	5.57 2.56 3.23	-2.44 0.37 -3.16	9.72 3.62 7.81	-6.39 -0.29 -7.81	<.0300 >.0300
et Surge (ft) Total Low Freq High Freq	-7.84 -7.84 -0.00	3.13 2.44 1.96	-0.32 -3.32 3.16	-15.30 -12.70 -3.12	3.79 1.23 7.28	-19.47 -16.91 -7.28	<.0300 >.0300
ML-1 (kips) Total Low Freq High Freq	226.75 226.75 0.00	16.82 15.29 7.02	267.66 258.01 15.48	190.72 203.33 -15.93	289.32 283.61 26.12	164.18 169.89 -26.12	<.0300 >.0300
ML-2 (kips) Total Low Freq High Freq	265.88 265.88 -0.00	11.25 9.29 6.35	293.45 287.09 10.91	245.16 251.67 -11.54	307.73 300.43 23.61	224.04 231.34 -23.61	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	17.17 17.17 0.00	103.24 25.11 100.15	194.69 75.28 140.97	-198.52 -40.98 -173.79	401.24 110.56 372.54	-366.91 -76.23 -372.54	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	-496.51	204.63 194.38 63.94	86.19 76.76 228.65	-686.85 -642.62 -187.65		-1257.73 -1219.61 -237.86	<.0300 >.0300

<b>1</b>	RESPONSE	SUMMARY	,	File:	113.CSV	02	-28-1996		
Response Compon Vave Elevation		Mean -0.04	Std 6.	dev 49	Max 8.35	Min -9.50	1/1000+ 24.09	1/1000- -24.17	Filter Fr(Hz)
Low	Freq	-0.02 -0.02 -0.00	0.	70 08 69	1.00 0.35 1.12	-1.15 -0.20 -1.12	2.58 0.29 2.58	-2.62 -0.33 -2.58	<.0300 >.0300
	Total Freq Freq	0.08 0.08 0.00	0.	.57 .26 .56	6.81 0.79 6.91	-6.66 -1.09 -7.04	17.07 1.04 16.96	-16.90 -0.87 -16.96	<.0300 >.0300
	Total Freq Freq	0.68 0.68 0.00	1.	.71 .16 .57	9.37 3.09 7.59	-6.96 -1.03 -7.39	18.21 4.99 16.99	-16.85 -3.63 -16.99	<.0300 >.0300
Low	Freq :	168.42 168.42 0.00	6	.13 1	78.16	118.06 155.00 -43.15	270.62 191.22 99.62	66.23 145.63 -99.62	<.0300 >.0300
	Freq	234.14 234.14 -0.00	3	.98 2	67.45 40.79 29.81	200.59 225.91 -28.91	304.12 248.96 68.39	164.17 219.32 -68.39	<.0300 >.0300
Low	Total Freq Freq	-5.28 -5.28 -0.00	7	.02 .04 .34	48.17 4.67 48.05	-65.65 -30.07 -59.20	132.42 20.90 135.19	-142.99 -31.47 -135.19	<.0300 >.0300
Low	Total Freq Freq	13.47 13.47 0.00	7	.88 .01 .41	91.08 23.79 72.43	-64.57 -16.60 -77.64	206.47 39.55 191.24	-179.54 -12.62 -191.24	<.0300 >.0300

RESPONSE	SUMMARY	, File:	: 121.CS	v 02-	28-1996		
tesponse Component Vave Elevation (ft)	Mean 0.41	Std dev 2.44	Max 9.58	Min -9.15	1/1000+ 9.47	1/1000- -8.65	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-0.03 -0.03 0.00	0.42 0.40 0.14	1.18 0.99 0.47	-1.29 -1.14 -0.46	1.54 1.45 0.53	-1.59 -1.50 -0.53	<.0300 >.0300
t Heave (ft) Total Low Freq High Freq	0.32 0.32 0.00	1.43 1.42 0.23	4.07 3.92 0.84	-3.74 -3.36 -0.87	5.66 5.59 0.87	-5.01 -4.94 -0.87	<.0300 >.0300
Pt Surge (ft) Total Low Freq High Freq	-0.72 -0.72 -0.00	1.45 1.42 0.31	3.61 3.30 1.25	-5.15 -4.62 -1.10	4.69 4.56 1.17	-6.13 -6.00 -1.17	<.0300 >.0300
Low Freq	175.78 175.78 0.00		224.91 221.99 12.40	143.71 146.16 -10.37	226.78 225.80 9.93	124.78 125.76 -9.93	<.0300 >.0300
MD 2 (MID)	235.73 235.73 -0.00		256.31 253.70 5.37	215.45 217.11 -4.62	262.31 261.74 5.49	209.14 209.72 -5.49	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	-0.58 -0.58 -0.00	85.51	276.37 218.74 114.81	-292.75 -262.99 -108.61	342.95 317.53 129.70	-344.12 -318.70 -129.70	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	42.24 42.24 -0.00		840.53 865.10 302.26	-202.30 -172.27 -248.88	469.37 454.77 110.74	-384.88 -370.28 -110.74	<.0300 >.0300

RESPONS	SE SUMMAR	Y, File	e: 122.CS	sv 02-	-28-1996		
Response Component Wave Elevation (ft)	Mean 0.44	Std dev 5.68	Max 26.05	Min -16.88	1/1000+ 21.57	1/1000- -20.69	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-0.04 -0.04 0.00	1.17 1.05 0.52	3.81 3.23 1.74	-4.17 -2.82 -1.89	4.31 3.85 1.93	-4.39 -3.93 -1.93	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.34 1.34 0.00	3.89 3.79 0.90	14.65 12.41 3.34	-9.72 -9.04 -3.46	15.81 15.42 3.34	-13.13 -12.74 -3.34	<.0300 >.0300
Pt Surge (ft) Total Low Freq High Freq	-6.05 -6.05 -0.00	8.02 7.96 0.97	16.43 14.50 4.42	-27.69 -26.13 -3.92	23.77 23.55 3.61	-35.87 -35.65 -3.61	<.0300 >.0300
ML-1 (kips) Total Low Freq High Freq	214.36 214.36 0.00	52.50 52.17 5.95	370.23 369.81 32.16	92.42 106.13 -27.80	409.67 408.42 22.13	19.04 20.30 -22.13	<.0300 >.0300
ML-2 (kips) Total Low Freq High Freq	257.24 257.24 0.00	27.46 27.26 3.36	330.60 329.42 21.66	189.45 200.43 -17.69	359.40 358.63 12.50	155.08 155.84 -12.50	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	15.58 15.58 -0.00	208.79 191.43 83.36	708.08 684.95 331.37	-823.37 -733.60 -291.41	792.29 727.70 310.11	-761.13 -696.53 -310.11	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	526.89 526.89 0.00	311.70 305.27 63.01	987.81 960.35 346.30	-407.83 -345.32 -513.00	1686.41 1662.48 234.39	-632.63 -608.69 -234.39	<.0300 >.0300

RESPONS	E SUMMAR	Y, Fil	le: 123.0	:sv 02	-28-1996		
esponse Component ave Elevation (ft)	Mean 0.30	Std dev 12.08	Max 49.45	Min -47.74	1/1000+ 45.22	1/1000- -44.62	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-0.04 -0.04 -0.00	1.94 1.40 1.34	5.85 3.77 5.39	-8.89 -4.36 -6.15	7.18 5.18 4.99	-7.25 -5.25 -4.99	<.0300 >.0300
t Heave (ft) Total Low Freq High Freq	2.42 2.42 0.00	6.23 4.94 3.80	30.63 16.82 16.04	-14.33 -11.57 -16.19	25.61 20.79 14.15	-20.77 -15.95 -14.15	<.0300 >.0300
t Surge (ft) Total Low Freq High Freq	-20.73 -20.73 -0.00	15.77 15.31 3.76	22.39 21.01 16.14	-66.52 -59.27 -16.94	37.93 36.23 14.01	-79.40 -77.70 -14.01	<.0300 >.0300
ML-1 (kips) Total Low Freq High Freq	300.54 300.54 -0.00	125.69 120.47 35.83	1665.29 1152.22 570.42	32.58 46.36 -442.24	768.11 748.71 133.29	-167.03 -147.62 -133.29	<.0300 >.0300
ML-2 (kips) Total Low Freq High Freq	310.15 310.15 0.00	60.48 57.54 18.65	876.65 646.40 256.44	159.73 165.95 -173.19	535.15 524.18 69.37	85.15 96.11 -69.37	<.0300 >.0300
BT-1 (kips) Total Low Freq	7.77 7.77	315.34 286.62	919.95	-1439.13 -957.27	1074.00	-1165.30 -1058.46 -489.15	<.0300 >.0300

475.74 -493.50

545.52 -687.44

360.66 -407.68

595.22

-971.62

489.15 -489.15

810.84 -903.65

734.14 -826.96 <.0300

354.41 -354.41 >.0300

>.0300

131.49

230.44

95.27

0.00

-46.41

Low Freq -46.41 209.83

High Freq

High Freq -0.00

T-2 (kips) Total

RESPON	SE SUMMAR	Y, File	e: 208.CSV	02-	28-1996		
Response Component Vave Elevation (ft)	Mean -0.14	Std dev 2.47	Max 3.76	Min -4.29	1/1000+ 9.04	1/1000- -9.31	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-1.66 -1.66 -0.00	0.80 0.76 0.25	-0.72 -0.89 0.88	-3.54 -3.61 -1.24	1.32 1.17 0.93	-4.63 -4.48 -0.93	<.0300 >.0300
t Heave (ft) Total Low Freq High Freq	1.16 1.16 -0.00	0.34 0.32 0.10	2.00 2.02 0.40	0.56 0.68 -0.39	2.43 2.37 0.38	-0.10 -0.05 -0.38	<.0300 >.0300
et Surge (ft) Total Low Freq High Freq	14.67 14.67 0.00	10.43 10.06 2.73	36.67 38.78 13.33	3.47 2.77 -10.54	53.47 52.11 10.15	-24.12 -22.77 -10.15	<.0300 >.0300
ML-1 (kips) Total Low Freq High Freq	352.53 352.53 0.00	24.02 23.94 1.97	393.22 388.14 5.39	312.01 313.32 -5.00	441.88 441.58 7.34	263.18 263.49 -7.34	<.0300 >.0300
ML-2 (kips) Total Low Freq High Freq	297.89 297.89 -0.00	14.73 14.67 1.35	321.76 320.36 2.94	273.47 274.57 -3.27	352.69 352.46 5.01	243.08 243.31 -5.01	<.0300 >.0300
BEX-1 (ft) Total Low Freq High Freq	0.08 0.08 -0.00	0.03 0.01 0.03	0.13 0.10 0.06	0.04 0.06 -0.05	0.18 0.10 0.10	-0.02 0.05 -0.10	<.0300 >.0300
BEX-2 (ft) Total Low Freq High Freq	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	<.0300 >.0300

RESPON	SE SUMMAR	Y, Fil	e: 212.CS	sv 02-	-28-1996		
Response Component	Mean	Std dev	Max	Min	1/1000+		
Vave Elevation (ft)	0.09	7.43	11.32	-13.65	27.74	-27.55	Fr(Hz)
Pitch (deg) Total	-5.58	1.60	-1.72	-9.94	0.37	-11.53	
Low Freq	-5.58	1.19	-3.06	-8.71	-1.17	-10.00	<.0300
High Freq	0.00	1.07	1.86	-1.93	3.99	-3.99	>.0300
t Heave (ft) Total	4.10	2.27	10.02	-0.56	12.55	-4.36	
Low Freq	4.10	1.17	7.87	2.37	8.47	-0.27	<.0300
High Freq	0.00	1.95	3.15	-3.44	7.24	-7.24	>.0300
et Surge (ft) Total	49.63	15.34	93.75	16.41	106.70	-7.44	
Low Freq	49.63	14.53	90.05	18.81	103.68	-4.42	<.0300
High Freq	0.00	4.93	13.79	<del>-</del> 13.15	18.32	-18.32	>.0300
ML-1 (kips) Total	410.54	12.53	435.96	376.12	457.17	363.91	
Low Freq	410.54	8.62	426.54	389.18	442.62	378.46	<.0300
High Freq	-0.00	9.10	16.23	-16.81	33.84	-33.84	>.0300
ML-2 (kips) Total	322.65	9.31	340.33	299.47	357.29	288.01	
Low Freq	322.65	4.41	329.42	312.02	339.07	306.23	<.0300
High Freq	-0.00	8.20	14.31	-12.99	30.50	-30.50	>.0300
_BEX-1 (ft) Total	0.16	0.03	0.24	0.10	0.27	0.04	
Low Freq	0.16	0.01	0.18	0.13	0.19	0.12	<.0300
High Freq	0.00	0.03	0.09	-0.06	0.11	-0.11	>.0300
BEX-2 (ft) Total	0.00	0.00	0.00	0.00	0.00	0.00	
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
High Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300

RESPONS	SE SUMMAR	Y, Fil	e: 213.CS	sv 02-	28-1996		
	Maan	Std dev	Max	Min	1/1000+	1/1000-	Filter
Response Component	Mean		9.24	-10.31	24.32	-24.33	Fr(Hz)
Wave Elevation (ft)	-0.01	6.54	9.24	-10.51	24.32	2	( /
	-5.26	0.81	-2.81	-7.15	-2.26	-8.25	
Pitch (deg) Total		0.59	-3.75	-6.72	-3.08	-7.43	<.0300
Low Freq	-5.26		1.34	-1.99	2.06	-2.06	>.0300
High Freq	0.00	0.55	1.34	1.00	2.00		
The Warrant (ft) Motal	2.80	4.30	10.03	-4.75	18.78	-13.19	
Pt Heave (ft) Total	2.80	0.57	4.18	1.33	4.91	0.68	<.0300
Low Freq			6.50	-6.41	15.84	-15.84	>.0300
High Freq	0.00	4.26	0.50	0.41	13.01		
of Goods (ft) Motal	57.13	8.44	75.56	31.27	88.52	25.73	
et Surge (ft) Total		7.14	74.50	38.13	83.69	30.56	<.0300
Low Freq	57.13		18.52	-14.08	16.74	-16.74	>.0300
High Freq	-0.00	4.50	10.52	14.00	100,1		
ir 1 (leina) Motal	359.47	26.80	406.04	312.01	459.18	259.76	
ML-1 (kips) Total	359.47	4.88	367.46	347.57	377.62	341.33	<.0300
Low Freq		26.36	40.12	-40.37	98.04	-98.04	>.0300
High Freq	0.00	26.30	40.12	40.57	30.01		
wr o (king) Total	290.96	21.22	325.47	258.61	369.90	212.02	
ML-2 (kips) Total	290.96	2.22	295.34	287.01	299.21	282.71	<.0300
Low Freq		21.11	32.37	-31.63	78.51	-78.51	>.0300
High Freq	-0.00	21.11	32.31	31.03			
	1.04	0.03	1.12	0.97	1.15	0.93	
BEX-1 (ft) Total Low Freq	1.04	0.01	1.06	1.01	1.10	0.99	<.0300
Low Freq		0.03	0.06	-0.07	0.10	-0.10	>.0300
High Freq	-0.00	0.03	0.00	0.07			
Prv_2 /f+\ motal	0.00	0.00	0.00	0.00	0.00	0.00	
BEX-2 (ft) Total Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300

0.00

0.00

High Freq

0.00

0.00

RESPONSE	SUMMARY	, Fil	e: 221.CSV	02-	-28-1996		
- Company	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
kesponse Component Vave Elevation (ft)	0.15	2.37	8.42	-9.05	8.97	-8.66	Fr(Hz)
<b>₽</b> itch (deg) Total	-6.27	1.50	-1.58	-9.36	-0.69	-11.85	
Low Freq	-6.27	1.48	-2.01	-9.00	-0.78	-11.76	<.0300
High Freq	-0.00	0.27	1.51	-1.95	1.02	-1.02	>.0300
t Heave (ft) Total	4.01	1.78	8.59	-0.90	10.64	-2.62	
	4.01	1.75	8.01	-0.75	10.53	-2.52	<.0300
High Freq	0.00	0.32	1.63	-1.56	1.19	-1.19	>.0300
Pt Surge (ft) Total	67.77	18.10	105.14	20.34	135.10	0.44	
- C Durge (10)	67.77	17.90	102.22	22.21	134.34	1.19	<.0300
20 1	0.00	2.70	22.82	-19.44	10.06	-10.06	>.0300
ML-1 (kips) Total	367.61	10.63		341.93	407.17	328.06	
_ Low Freq	367.61	10.33	-	342.04	406.05	329.18	<.0300
High Freq	-0.00	2.51	12.00	-7.84	9.33	-9.33	>.0300
ML-2 (kips) Total	292.23	5.54		277.18	312.86	271.61	. 0200
Low Freq	292.23	5.29		279.41	311.90	272.56	<.0300
High Freq	-0.00	1.67	6.06	-5.24	6.21	-6.21	>.0300
BEX-1 (ft) Total	0.34	0.12	0.65	0.16	0.80	-0.12	
Low Freq	0.34	0.12	0.62	0.18	0.79	-0.11	<.0300
High Freq	0.00	0.03	0.19	-0.20	0.10	-0.10	>.0300
BEX-2 (ft) Total	0.00	0.00	0.00	0.00	0.00	0.00	. 0202
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
High Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300

RESPONS	SE SUMMAR	Y, Fil	e: 222.CSV	7 02-	-28-1996		
The second Component	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
Response Component Nave Elevation (ft)	0.39	6.00	28.90	-16.39	22.73	-21.95	Fr(Hz)
<b>₽</b> itch (deg) Total	-6.01	1.50	-1.90	-10.81	-0.44	-11.58	
Low Freq	-6.01	1.37	-2.92	-9.31	-0.93	-11.09	<.0300
High Freq	-0.00	0.61	2.05	-1.90	2.29	-2.29	>.0300
t Heave (ft) Total	4.16	3.25	13.66	-3.89	16.25	-7.93	
Low Freq	4.16	3.14	11.88	-3.30	15.83	-7.50	<.0300
High Freq	-0.00	0.86	2.95	-3.13	3.19	-3.19	>.0300
et Surge (ft) Total	59.10	10.27	89.48	35.20	97.28	20.91	
Low Freq	59.10	9.77	82.20	39.13	95.44	22.76	<.0300
High Freq	-0.00	3.15	11.24	-14.00	11.73	-11.73	>.0300
ML-1 (kips) Total	421.69	43.59	564.18	346.20	583.85	259.53	
Low Freq	421.69	43.01	554.04	350.77	581.68	261.70	<.0300
High Freq	0.00	7.11	62.32	-45.39	26.44	-26.44	>.0300
ML-2 (kips) Total	315.69	26.57	403.48	266.04	414.51	216.87	- 0000
Low Freq	315.69	26.16	397.02	266.29	413.01	218.36	<.0300
High Freq	0.00	4.61	35.50	-30.29	17.14	-17.14	>.0300
BEX-1 (ft) Total	-0.02	0.04	0.10	-0.14	0.13	-0.18	
Low Freq	-0.02	0.03	0.05	-0.10	0.09	-0.14	<.0300
High Freq	0.00	0.03	0.08	-0.07	0.10	-0.10	>.0300
BEX-2 (ft) Total	0.00	0.00	0.00	0.00	0.00	0.00	
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
High Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300

RESPONSI	E SUMMAR	Y, Fil	le: 223.CS	02·	-28-1996		
Togrange Component	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
Response Component Nave Elevation (ft)	0.32	12.41	51.78	-44.04	46.49	-45.84	Fr(Hz)
Pitch (deg) Total Low Freq	-6.23	3.20	0.64	-17.05	5.67	-18.13	
Low Freq	-6.23	2.87	-1.33	-14.04	4.46	-16.91	<.0300
High Freq	0.00	1.41	5.56	-6.26	5.23	-5.23	>.0300
et Heave (ft) Total	4.46	5.71	33.64	-11.44	25.69	-16.77	
Low Freq	4.46	4.39	18.99	-10.41	20.78	-11.86	<.0300
High Freq	-0.00	3.65	15.46	-15.47	13.57	-13.57	>.0300
Pt Surge (ft) Total	41.35	18.88	99.59	-14.44	111.56	-28.87	
	41.35	17.71	94.93	-6.66	107.24	-24.55	<.0300
	-0.00	6.52	27.59	-25.02	24.26	-24.26	>.0300
ML-1 (kips) Total	505.19	230.24	2838.02	226.53	1361.68	-351.31	
112 - (11-F-)	505.19	218.79	2249.51	220.76	1319.08	-308.70	<.0300
High Freq	-0.00	71.72	827.17	-763.74	266.79	-266.79	>.0300
ML-2 (kips) Total	375.34	111.52	1759.31	221.46	790.18	-39.50	
	375.34	100.80	1158.28	219.26	750.30	0.37	<.0300
	0.00	47.71	650.25	-449.92	177.47	-177.47	>.0300
BEX-1 (ft) Total	-0.06	0.04	0.10	-0.19	0.07	-0.20	
Low Freq	-0.06	0.02	0.01	-0.13	0.02	-0.15	<.0300
High Freq	0.00	0.03	0.09	-0.07	0.10	-0.10	>.0300
BEX-2 (ft) Total	-0.00	0.09	0.00	-2.41	0.31	-0.32	
Low Freq	-0.00	0.04	0.08	-0.38	0.14	-0.14	<.0300
High Freq	0.00	0.08	0.37	-2.03	0.29	-0.29	>.0300

High Freq 0.00

RESPONS	SE SUMMAR	Y, File	e: 311.CS	v 02-	-28-1996		
Response Component Vave Elevation (ft)	Mean 0.33	Std dev 3.18	Max 6.30	Min -5.97	1/1000+ 12.17	1/1000- -11.52	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	0.14 0.14 0.00	0.30 0.29 0.07	0.72 0.70 0.20	-0.38 -0.30 -0.30	1.25 1.21 0.28	-0.97 -0.93 -0.28	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.51 0.51 -0.00	0.61 0.60 0.09	1.68 1.55 0.32	-0.56 -0.55 -0.18	2.79 2.76 0.34	-1.76 -1.73 -0.34	<.0300 >.0300
Pt Surge (ft) Total Low Freq High Freq	-4.06 -4.06 -0.00	2.19 2.18 0.21	-0.23 -0.43 0.45	-6.79 -6.44 -0.58	4.07 4.03 0.79	-12.20 -12.16 -0.79	<.0300 >.0300
ML-1 (kips) Total Low Freq High Freq	294.24 294.24 0.00	13.06 12.80 2.58	324.05 322.58 8.26	272.76 276.70 -6.52	342.83 341.88 9.59	245.65 246.61 -9.59	<.0300 >.0300
ML-2 (kips) Total Low Freq High Freq	281.65 281.65 0.00	6.39 6.27 1.25	296.16 294.97 2.96	270.16 272.80 -3.29	305.42 304.96 4.64	257.88 258.33 -4.64	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	-3.39 -3.39 -0.00	76.02 57.40 49.84		-182.80 -117.74 -91.22	279.42 210.15 185.42	-286.20 -216.93 -185.42	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	3.22 3.22 0.00	44.13 35.20 26.62	97.34 69.71 58.50	-89.44 -68.80 -53.32	167.39 134.15 99.04	-160.95 -127.71 -99.04	<.0300 >.0300

RESPONSE	SUMMARY	, File	e: 312.CS	o 2 –	28-1996		
Response Component Vave Elevation (ft)	Mean 0.31	Std dev 7.60	Max 11.57	Min -11.70	1/1000+ 28.57	1/1000- -27.95	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-0.03 -0.03 -0.00	0.86 0.11 0.85	1.45 0.27 1.30	-1.44 -0.30 -1.25	3.15 0.39 3.16	-3.22 -0.46 -3.16	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.64 0.64 0.00	1.90 0.57 1.82	4.22 1.72 2.84	-2.96 -0.55 -2.71	7.72 2.75 6.75	-6.44 -1.47 -6.75	<.0300 >.0300
et Surge (ft) Total Low Freq High Freq	-7.77 -7.77 0.00	3.04 2.30 1.98	-0.97 -4.01 3.10	-15.76 -12.96 -3.13	3.52 0.79 7.37	-19.06 -16.33 -7.37	<.0300 >.0300
Low Freq	333.93 333.93 0.00	15.97 14.97 5.57	375.33 368.14 11.56	302.67 308.68 -12.00	393.35 389.62 20.72	274.51 278.24 -20.72	<.0300 >.0300
Low Freq	299.60 299.60 -0.00	8.74 6.93 5.33	322.16 315.86 10.08	281.30 288.71 -9.83	332.13 325.38 19.83	267.07 273.82 -19.83	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	-1.94 -1.94 0.00	97.53 28.06 93.41	185.49 72.15 134.93	-202.55 -68.30 -150.51	360.88 102.44 347.48	-364.76 -106.32 -347.48	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	-9.96 -9.96 0.00	66.17 23.53 61.85	127.29 48.47 94.24	-152.88 -57.37 -107.04	236.20 77.55 230.07	-256.12 -97.47 -230.07	<.0300 >.0300

RESPONSE	SUMMARY	, File:	313.CSV	02-2	28-1996		
Response Component Vave Elevation (ft)	Mean 0.20	Std dev 6.63	Max 9.45	Min -9.93	1/1000+ 24.86	1/1000- -24.45	Filter Fr(Hz)
Titti (acq)	-0.01 -0.01 0.00	0.69 0.07 0.69	1.02 0.14 1.09	-1.10 -0.38 -1.06	2.55 0.25 2.55	-2.57 -0.26 -2.55	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.11 0.11 0.00	4.29 0.14 4.29	6.33 0.71 6.99	-6.19 -0.69 -6.41	16.06 0.64 15.94	-15.84 -0.42 -15.94	<.0300 >.0300
E Durge (10)	-1.48 -1.48 0.00	4.90 1.13 4.76	7.23 2.14 7.32	-9.75 -3.39 -7.73	16.73 2.70 17.73	-19.70 -5.67 -17.73	<.0300 >.0300
MD I (MIDS)	60.17 60.17 0.00		274.51	204.37 240.05 -42.70	366.55 290.28 102.03	153.80 230.06 -102.03	<.0300 >.0300
Low Freq 2	73.44 73.44 -0.00		279.61	244.15 263.89 -26.41	337.15 284.38 62.76	209.73 262.50 -62.76	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	2.10 2.10 0.00	37.64 5.24 37.28	16.53	-57.41 -10.27 -59.50	142.12 21.58 138.66	-137.93 -17.38 -138.66	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	-4.87 -4.87 0.00	49.62 4.59 49.40		-89.28 -23.11 -79.45	179.70 12.20 183.78	-189.44 -21.94 -183.78	<.0300 >.0300

	RESPONSE	SUMMARY	, File	: 321.CS	v 02-	28-1996		
Thermones Compo	nont	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
Response Compo Wave Elevation	(ft)	0.32	2.53	9.60	-9.45	9.73	-9.10	Fr(Hz)
Pitch (deg)	Total ·	-0.00	0.36	1.21	-1.29	1.32	-1.32	
Low		-0.00	0.34	1.16	-1.09	1.26	-1.26	<.0300
	Freq	0.00	0.10	0.36	-0.31	0.38	-0.38	>.0300
Dt Heave (ft)	Total	0.22	1.02	3.35	-2.48	4.01	-3.57	
Pt Heave (ft)	Freq	0.22	1.00	3.05	-2.45	3.93	-3.49	<.0300
		-0.00	0.21	0.75	-0.78	0.78	-0.78	>.0300
Pt Surge (ft)	Total	-1.79	3.63	5.95	-9.40	11.73	-15.30	
		-1.79	3.62	5.48	-8.82	11.68	-15.26	<.0300
		-0.00	0.30	1.06	-1.81	1.10	-1.10	>.0300
ML-1 (kips)	Total 2	71.33	22.98	332.59	221.47	356.83	185.83	
	Freq 2	71.33	22.83	330.50	224.68	356.27	186.40	<.0300
	Freq	0.00	2.63	12.57	-18.35	9.80	-9.80	>.0300
ML-2 (kips)	Total 2	77.14	10.70	303.59	251.58	316.93	237.35	
Lov	Freq 2	77.14	10.60	305.06	253.09	316.56	237.72	<.0300
		-0.00	1.46	5.01	-5.45	5.43	-5.43	>.0300
_BT-1 (kips)	Total	3.72	72.52		-206.61	273.49	-266.05	
BT-1 (kips) Lov	v Freq	3.72	67.28	188.56	-166.66	254.00	-246.56	<.0300
High	n Freq	0.00	27.06	92.10	-78.50	100.68	-100.68	>.0300
BT-2 (kips)	Total	0.49	50.18		-124.44	187.15	-186.17	
	w Freq	0.49	46.76		-106.33	174.42	-173.45	<.0300
		-0.00	18.21	69.68	-52.81	67.73	-67.73	>.0300

RESPONSI	E SUMMAR	Y, File	e: 322.CS	v 02-	28-1996		
Response Component Vave Elevation (ft)	Mean 0.42	Std dev 5.72	Max 23.96	Min -16.94	1/1000+ 21.71	1/1000- -20.86	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	0.06 0.06 -0.00	0.89 0.78 0.43	2.87 2.27 1.50	-2.96 -2.04 -1.64	3.37 2.95 1.60	-3.25 -2.83 -1.60	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.67 0.67 -0.00	2.56 2.43 0.80	9.69 8.55 2.91	-6.25 -6.32 -2.99	10.19 9.72 2.96	-8.85 -8.37 -2.96	<.0300 >.0300
Low Freq	-10.04 -10.04 -0.00	9.28 9.22 1.07	14.50 12.12 10.83	-37.69 -36.22 -12.58	24.50 24.27 3.97	-44.57 -44.34 -3.97	<.0300 >.0300
Low Freq	333.17 333.17 0.00	60.57 60.24 6.32	524.93 514.34 91.88	183.00 186.55 -101.82	558.50 557.27 23.50	107.85 109.08 -23.50	<.0300 >.0300
	302.26 302.26 0.00	27.98 27.78 3.27	385.31 377.63 32.58	233.01 241.58 -34.00	406.33 405.62 12.17	198.19 198.91 -12.17	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	13.20 13.20 -0.00	165.63 151.86 66.12	484.92 413.15 264.06	-627.45 -528.83 -197.58	629.35 578.14 245.95	-602.95 -551.73 -245.95	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	-3.83 -3.83 0.00	118.58 109.33 45.92	331.36 281.75 175.33	-415.75 -343.13 -161.31	437.29 402.87 170.83	-444.96 -410.54 -170.83	<.0300 >.0300

RESPO	NSE SUMMAF	RY, Fil	le: 323.C	sv 02-	-28-1996		
Response Component Vave Elevation (ft)	Mean 0.36	Std dev 12.70	Max 49.31	Min -45.53	1/1000+ 47.63	1/1000- -46.90	Filter Fr(Hz)
Pitch (deg) Total Low Fred High Fred	$_{\rm I}$ -0.07	1.69 1.21 1.17	5.36 3.96 4.63	-7.94 -4.04 -5.17	6.21 4.44 4.37	-6.35 -4.58 -4.37	<.0300 >.0300
Pt Heave (ft) Total Low Fred High Fred	1.11	4.97 3.53 3.49	21.68 10.85 14.59	-18.36 -8.95 -14.28	19.59 14.25 12.99	-17.38 -12.04 -12.99	<.0300 >.0300
Pt Surge (ft) Total Low Fred High Fred	4 -18.48	14.35 13.90 3.57	24.28 22.23 15.01	-58.58 -50.33 -14.87	34.90 33.22 13.30	-71.86 -70.18 -13.30	<.0300 >.0300
ML-1 (kips) Total Low Fred High Fred	415.29	134.55 126.37 46.20	1798.62 1227.92 603.17	144.53 149.16 -396.23	915.81 885.37 171.87	-85.23 -54.79 -171.87	<.0300 >.0300
ML-2 (kips) Total Low Fred High Fred	g 335.80	45.55 43.42 13.77	593.33 501.20 102.65	210.72 214.56 -68.75	505.25 497.33 51.21	166.35 174.28 -51.21	<.0300 >.0300
BT-1 (kips) Total Low Fred High Fred	q -28.50	264.64 238.38 114.94	799.48 704.36 349.86	-1285.58 -894.59 -393.16	955.96 858.26 427.57	-1012.96 -915.26 -427.57	<.0300 >.0300
BT-2 (kips) Total Low Free High Free	q -40.11	186.37 165.24 86.19	500.48 479.38 310.18	-864.03 -689.46 -287.06	653.18 574.58 320.64	-733.40 -654.80 -320.64	<.0300 >.0300

RESPON	SE SUMMARY	, File	e: 351.CS	v 02-	28-1996		
The surrous Company	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
Response Component Nave Elevation (ft)	-0.48	3.22	4.43	-5.70	11.49	-12.44	Fr(Hz)
Pitch (deg) Total	-0.12	0.24	0.50	-0.62	0.77	-1.02	
Low Freq	-0.12	0.22	0.46	-0.46	0.70	-0.94	<.0300
High Freq	0.00	0.10	0.39	-0.27	0.36	-0.36	>.0300
Pt Heave (ft) Total	0.91	0.51	1.82	0.00	2.81	-0.98	
Low Freq	0.91	0.49	1.68	0.14	2.72	-0.89	<.0300
High Freq	0.00	0.15	0.58	-0.70	0.56	-0.56	>.0300
Pt Surge (ft) Total	1.98	2.64	5.50	-2.71	11.81	-7.85	
Low Freq	1.98	2.64	5.32	-2.59	11.79	-7.83	<.0300
High Freq	-0.00	0.15	0.46	-0.36	055	-0.55	>.0300
ML-1 (kips) Total	246.74	14.49	285.58	225.74	300.65	192.84	
Low Freq	246.74	14.10	276.04	227.84	299.20	194.29	<.0300
High Freq	-0.00	3.34	11.53	-13.78	12.41	-12.41	>.0300
ML-2 (kips) Total	333.91	10.07	355.59	314.73	371.39	296.44	
Low Freq	333.91	9.97	355.05	317.33	371.00	296.83	<.0300
High Freq	0.00	1.45	4.76	-5.02	5.41	-5.41	>.0300
_BT-1 (kips) Total	-43.85	79.45	140.91	-252.30	251.71	-339.42	
BT-1 (kips) Total Low Freq	-43.85	49.63	81.57	-138.48	140.78	-228.49	<.0300
High Freq	-0.00	62.04	131.57	-122.93	230.80	-230.80	>.0300
BT-2 (kips) Total	-2.98	41.65	124.47	-77.87	151.94	-157.91	
Low Freq	-2.98	24.62	68.46	-34.12		-94.57	<.0300
High Freq	0.00	33.59	60.98	-54.54	124.95	-124.95	>.0300

RESPONSI	E SUMMARY	, File	e: 352.CS	02-	28-1996		
Response Component Vave Elevation (ft)	Mean 0.27	Std dev 7.79	Max 12.68	Min -13.50	1/1000+ 29.26	1/1000- -28.72	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	0.39 0.39 -0.00	1.01 0.10 1.01	1.97 0.53 1.50	-1.24 0.17 -1.56	4.14 0.75 3.74	-3.37 0.02 -3.74	<.0300 >.0300
	1.81 1.81 -0.00	2.15 0.49 2.09	5.36 2.66 3.31	-1.86 0.97 -3.17	9.81 3.65 7.79	-6.19 -0.03 -7.79	<.0300 >.0300
Low Freq	-13.20 -13.20 -0.00	3.37 2.65 2.08	-7.05 -9.53 3.21	-20.00 -16.89 -3.45	-0.66 -3.34 7.75	-25.73 -23.05 -7.75	<.0300 >.0300
_ Low Freq	283.91 283.91 0.00	17.43 15.53 7.91	319.77 306.65 15.12	251.39 263.09 -15.28	348.76 341.70 29.43	219.06 226.12 -29.43	<.0300 >.0300
	356.93 356.93 -0.00	10.10 7.35 6.93	377.88 368.93 14.17	333.30 344.90 -12.10	394.50 384.27 25.78	319.35 329.59 -25.78	<.0300 >.0300
DI I (1610)	45.22 45.22 -0.00	102.29 23.64 99.52	100.05	-132.35 10.81 -163.38	425.73 133.15 370.21	-335.29 -42.70 -370.21	<.0300 >.0300
D T D (	-12.38 -12.38 -0.00	88.53 19.18 86.43	32.31	-177.45 -45.68 -132.17	316.97 58.99 321.52	-341.72 -83.74 -321.52	<.0300 >.0300

RE	ESPONSE	SUMMARY	,	File:	353.CSV	02-2	28-1996		
Response Compone Vave Elevation		Mean -0.04	Std 6.	dev 66	Max 9.22	Min -9.62	1/1000+ 24.72	1/1000- -24.80	Filter Fr(Hz)
Pitch (deg) To Low H High H	otal Freq Freq	0.06 0.06 -0.00	0.	74 08 74	1.24 0.42 1.20	-1.04 -0.03 -1.13	2.81 0.34 2.74	-2.69 -0.22 -2.74	<.0300 >.0300
Pt Heave (ft) To Low H High D	req	0.19 0.19 -0.00	0.	57 26 57	6.86 1.48 6.91	-6.61 -0.24 -6.87	17.20 1.16 16.99	-16.83 -0.78 -16.99	<.0300 >.0300
Pt Surge (ft) To Low I High I	Freq	-0.40 -0.40 -0.00	1.	.11 .73 .81	8.25 2.02 7.52	-10.06 -4.34 -7.68	18.62 6.03 17.90	-19.42 -6.83 -17.90	<.0300 >.0300
ML-1 (kips) To Low High D	Freq 2	36.86 36.86 0.00	21 . 7 . 20 .	49 2	277.03 254.68 34.46	200.10 225.81 -32.80	318.05 264.71 76.26	155.67 209.01 -76.26	<.0300 >.0300
ML-2 (kips) To Low High	Freq 3	25.10 25.10 -0.00	5.		359.31 338.82 32.25	288.73 317.95 -30.32	400.12 344.66 72.42	250.08 305.54 -72.42	<.0300 >.0300
BT-1 (kips) To Low : High :	Freq	-5.40 -5.40 -0.00	6	.34 .48 .76	60.86 10.34 58.05	-68.49 -18.11 -57.76	129.80 18.70 133.03	-140.60 -29.49 -133.03	<.0300 >.0300
BT-2 (kips) T Low High	_	0.36 0.36 0.00	5	.98 .81 .69	91.81 19.07 84.20	-94.96 -9.96 -93.83	219.75 21.96 218.33	-219.03 -21.24 -218.33	<.0300 >.0300

RESPONSE	SUMMARY	, File	e: 361.CS	V 02-	-28-1996		
Transpare Component	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
kesponse Component Vave Elevation (ft)	0.11	2.34	8.54	-8.88	8.81	-8.60	Fr(Hz)
10011 (409)	-0.02	0.40	1.15	-1.05	1.46	-1.50	- 0200
Low Freq	-0.02	0.38	0.97	-0.93	1.38	-1.41	<.0300
High Freq	0.00	0.13	0.47	-0.42	0.49	-0.49	>.0300
t Heave (ft) Total	0.35	1.01	3.09	-2.39	4.11	-3.41	
Low Freq	0.35	0.98	3.07	-2.14	4.01	-3.32	<.0300
High Freq	0.00	0.23	0.78	-0.89	0.86	-0.86	>.0300
t Surge (ft) Total	-0.91	1.86	4.03	-6.53	6.00	-7.83	
Low Freq	-0.91	1.83	3.20	-6.24	5.91	-7.74	<.0300
High Freq	0.00	0.30	1.42	-1.68	1.11	-1.11	>.0300
ML-1 (kips) Total 2	41.14	11.79	277.03	208.65	285.02	197.27	
:12 I (::-F-)	41.14	11.45	272.05	212.93	283.72	198.57	<.0300
	0.00	2.85	12.69	-9.23	10.59	-10.59	>.0300
ML-2 (kips) Total 3	27.41	7.80	348.16	307.30	356.42	298.41	
Low Freq 3	27.41	7.65	348.30	307.36	355.86	298.96	<.0300
	-0.00	1.52	5.60	-5.11	5.65	-5.65	>.0300
_BT-1 (kips) Total	-3.24	79.15	235.20	-235.62	291.22	-297.69	
BT-1 (kips) Total Low Freq	-3.24	72.06	172.97	-192.78	264.82	-271.29	<.0300
High Freq	-0.00	32.76	108.88	<b>-</b> 95.42	121.87	-121.87	>.0300
BT-2 (kips) Total	15.80	51.11		-142.47	205.94	-174.33	
	15.80	44.80	173.28	-104.05	182.45	-150.85	<.0300
	-0.00	24.61	94.26	-89.91	91.54	-91.54	>.0300

RESPONSE	SUMMARY	, Fil	e: 362.CS	v 02-	-28 <b>-</b> 1996		
Response Component Vave Elevation (ft)	Mean 0.30	Std dev 5.87	Max 26.89	Min -18.29	1/1000+ 22.12	1/1000- -21.52	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	0.05 0.05 -0.00	1.15 1.02 0.53	4.29 3.64 1.77	-4.99 -3.46 -1.87	4.32 3.85 1.96	-4.22 -3.75 -1.96	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.64 1.64 0.00	3.74 3.63 0.93	14.81 12.48 3.48	-8.89 -8.35 -3.36	15.57 15.13 3.44	-12.28 -11.84 -3.44	<.0300 >.0300
Pt Surge (ft) Total Low Freq High Freq	-7.60 -7.60 0.00	7.66 7.60 0.93	13.19 11.42 3.16	-29.45 -27.14 -2.87	20.89 20.68 3.46	-36.09 -35.88 -3.46	<.0300 >.0300
Low Freq	285.46 285.46 0.00	43.69 43.17 6.68	435.17 426.72 27.39	183.00 186.26 -39.80	447.97 446.06 24.84	122.94 124.85 -24.84	<.0300 >.0300
Low Freq	354.10 354.10 -0.00	28.63 28.38 3.77	437.31 427.79 15.29	285.02 286.24 -25.97	460.60 459.67 14.04	247.61 248.54 -14.04	<.0300 >.0300
BT-1 (kips) Total Low Freq High Freq	-6.14 -6.14 -0.00	210.16 193.56 81.87	684.46	-794.86 -692.26 -260.43	775.66 713.90 304.57	-787.94 -726.17 -304.57	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	45.73 45.73 0.00	164.05 132.56 96.65	606.65 538.68 381.13	-633.34 -307.70 -475.94	656.00 538.83 359.55	-564.54 -447.38 -359.55	<.0300 >.0300

RESPONSI	E SUMMAR	y, Fil	le: 363.CS	SV 02-	-28-1996		
Response Component Wave Elevation (ft)	Mean 0.33	Std dev 12.31	Max 50.55	Min -44.94	1/1000+ 46.11	1/1000- -45.44	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-0.27 -0.27 0.00	1.89 1.33 1.34	5.79 3.55 5.28	-8.98 -4.33 -5.94	6.75 4.69 4.97	-7.28 -5.22 -4.97	<.0300 >.0300
	3.41 3.41 -0.00	6.17 4.88 3.79	32.03 17.98 16.51	-13.54 -9.90 -16.38	26.38 21.55 14.08	-19.55 -14.72 -14.08	<.0300 >.0300
Low Freq	-19.18 -19.18 -0.00	15.52 15.08 3.67	27.87 27.46 17.21	-70.39 -62.00 -16.89	38.56 36.92 13.67	-76.92 -75.27 -13.67	<.0300 >.0300
_ Low Freq	379.23 379.23 0.00	115.52 110.49 33.71	1721.68 1220.16 560.26	148.81 162.55 -406.53	808.97 790.27 125.39	-50.51 -31.81 -125.39	<.0300 >.0300
TILL 2 (MILPO)	405.61 405.61 0.00	73.45 67.73 28.40	1384.54 937.01 474.21	236.73 238.14 -311.19	678.84 657.58 105.66	132.38 153.64 -105.66	<.0300 >.0300
	-77.37 -77.37 -0.00	323.04 293.74 134.42	886.55 783.94 469.23	-1312.33 -984.64 -578.60		-1279.07 -1170.08 -500.06	<.0300 >.0300
BT-2 (kips) Total Low Freq High Freq	60.65 60.65 -0.00	254.14 195.46 162.43	688.97	-1506.68 -398.57 -1114.47	1006.05 787.76 604.23	-884.74 -666.45 -604.23	<.0300 >.0300

RESPONSE	SUMMARY	, File	: 411.CSV	02-	28-1996		
	Mean	Std dev	Max	Min	1/1000+		Filter
Response Component	0.24	3.09	5.39	-4.52	11.74	-11.27	Fr(Hz)
Wave Elevation (ft)	0.24	3.00					
make a company motes	0.95	0.16	1.40	0.58	1.53	0.36	
Pitch (deg) Total Low Freq	0.95	0.13	1.19	0.63	1.44	0.46	<.0300
High Freq	-0.00	0.08	0.31	-0.36	0.31	-0.31	>.0300
High Fleq	0.00	• • • •					
ot Heave (ft) Total	0.77	0.26	1.28	0.33	1.72	-0.19	
Pt Heave (ft) Total Low Freq	0.77	0.24	1.23	0.38	1.66	-0.13	<.0300
High Freq	0.00	0.09	0.27	-0.41	0.33	-0.33	>.0300
migh freq						- 45	
Pt Surge (ft) Total	-1.90	1.49	0.45	-4.38	3.65	-7.45	< 0200
Low Freq	-1.90	1.47	0.25	-4.44	3.56	<b>-7.35</b>	<.0300 >.0300
High Freq	-0.00	0.27	1.03	-1.18	1.01	-1.01	>.0300
might in it					004 20	220 05	
ML-1 (kips) Total 2	266.71	7.44	283.54	253.63	294.38	239.05	<.0300
	266.71	6.99	282.14	257.57	292.73	240.70 -9.41	>.0300
High Freq	-0.00	2.53	5.07	-7.22	9.41	-9.41	/.0300
				000 50	224 77	184.45	
ML-2 (kips) Total	209.61	6.76	222.88	200.59	234.77 234.34	184.89	<.0300
Low Freq	209.61	6.65	219.68	200.46	4.66	-4.66	>.0300
High Freq	-0.00	1.25	3.35	-3.38	4.00	4.00	.0300
-			0.00	0.00	0.00	0.00	
BEX-1 (ft) Total	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300
High Freq	0.00	0.00	0.00	0.00	0.00	• • • • • • • • • • • • • • • • • • • •	
	0.00	0.00	0.00	0.00	0.00	0.00	
BEX-2 (ft) Total	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300
High Freq	0.00	0.00	0.00	0.00			

RESPONSE	SUMMARY	, File	: 412.CSV	02-	28-1996		
response Component Wave Elevation (ft)	Mean 0.34	Std dev 7.67	Max 12.23	Min -11.81	1/1000+ 28.87	1/1000- -28.18	Filter Fr(Hz)
10011 (0004)	-0.14 -0.14 0.00	1.00 0.25 0.97	1.75 0.38 1.49	-1.97 -0.69 -1.45	3.60 0.79 3.62	-3.87 -1.06 -3.62	<.0300 >.0300
Low Freq	2.01 2.01 -0.00	2.11 0.30 2.09	5.88 3.04 3.23	-1.55 1.35 -3.21	9.86 3.13 7.78	-5.85 0.89 -7.78	<.0300 >.0300
THE DULGE (AC)	-7.14 -7.14 -0.00	2.76 1.75 2.13	-1.09 -4.22 3.60	-12.67 -9.94 -3.39	3.11 -0.62 7.91	-17.40 -13.67 -7.91	<.0300 >.0300
Low Freq	300.34 300.34 -0.00	14.54 12.67 7.12	334.83 321.64 14.90	266.45 274.66 -13.57	354.41 347.48 26.49	246.27 253.20 -26.49	<.0300 >.0300
110 2 (1120)	229.48 229.48 0.00	9.83 7.20 6.70	252.59 242.66 11.58	208.02 216.52 -12.29	266.06 256.27 24.91	192.89 202.69 -24.91	<.0300 >.0300
BEX-1 (ft) Total Low Freq High Freq	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	<.0300 >.0300
BEX-2 (ft) Total Low Freq High Freq	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	<.0300 >.0300

RESPONSE	SUMMARY	, File	: 413.CSV	02-	28-1996		
Component	Mean	Std dev	Max	Min	1/1000+	1/1000-	
Response Component wave Elevation (ft)	0.22	6.48	8.65	-9.42	24.33	-23.89	Fr(Hz)
Pitch (deg) Total	0.05	0.71	1.17	-1.10	2.70	-2.60	
Low Freq	0.05	0.07	0.20	-0.08	0.33	-0.23	<.0300
High Freq	0.00	0.71	1.09	-1.06	2.64	-2.64	>.0300
t Heave (ft) Total	0.27	4.55	6.92	-6.31	17.21	-16.67	
Low Freq	0.27	0.13	0.74	-0.07	0.77	-0.23	<.0300
High Freq	0.00	4.55	6.73	-6.67	16.93	-16.93	>.0300
t Surge (ft) Total	-1.10	5.06	8.48	-10.41	17.73	-19.94	
TEL DUILUC (ID) ICON	-1.10	1.69	1.47	-3.80	5.17	-7.38	<.0300
201	0.00	4.77	7.22	<del>-</del> 7.50	17.76	-17.76	>.0300
in a (laine) motel 2	57.06	27.29	309.19	210.88	358.58	155.55	
HL I (MIPO)	57.06	<b>D</b> . •		245.57	283.84	230.29	<.0300
	-0.00	26.32	44.01	-40.34	97.92	-97.92	>.0300
ML-2 (kips) Total 2	02.06	19.96	237.73	167.16	276.32	127.81	- 0200
Low Freq 2	202.06	4.87	210.15	194.42	220.19	183.93	<.0300
	-0.00	19.36	30.59	-29.29	72.01	-72.01	>.0300
BEX-1 (ft) Total	0.00	0.00	0.00	0.00	0.00	0.00	
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
High Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300
BEX-2 (ft) Total	0.00	0.00	0.00	0.00	0.00	0.00	. 0200
Low Freq	0.00	0.00	0.00	0.00	0.00	0.00	<.0300
High Freq	0.00	0.00	0.00	0.00	0.00	0.00	>.0300

RESPON	SE SUMMAR	Y, Fil	e: 422.CS	sv 02-	28-1996		
Response Component Wave Elevation (ft)	Mean 0.47	Std dev 5.93	Max 28.88	Min -17.11	1/1000+ 22.55	1/1000- -21.60	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-0.14 -0.14 -0.00	1.26 1.14 0.54	2.84 2.61 3.23	-4.80 -3.53 -1.93	4.54 4.09 2.00	-4.82 -4.37 -2.00	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.57 1.57 -0.00	3.60 3.48 0.93	11.09 9.95 3.10	-7.15 -5.86 -3.19	14.98 14.53 3.45	-11.84 -11.39 -3.45	<.0300 >.0300
Pt Surge (ft) Total Low Freq High Freq	-6.03 -6.03 0.00	6.11 6.04 0.92	9.87 7.86 3.38	-19.61 -18.58 -5.14	16.71 16.45 3.42	-28.77 -28.51 -3.42	<.0300 >.0300
ML-1 (kips) Total Low Freq High Freq	338.26 338.26 0.00	41.40 40.94 6.19	450.23 450.85 21.09	249.35 262.27 -25.12	492.28 490.55 23.01	184.24 185.96 -23.01	<.0300 >.0300
ML-2 (kips) Total Low Freq High Freq	227.35 227.35 0.00	23.01 22.73 3.61	293.45 292.50 12.99	178.30 183.58 -13.66	312.95 311.89 13.44	141.75 142.81 -13.44	<.0300 >.0300
BEX-1 (ft) Total Low Freq High Freq	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	<.0300 >.0300
BEX-2 (ft) Total Low Freq High Freq	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	<.0300 >.0300

RESPONSI	E SUMMAR!	, Fil	e: 423.CS	02-	28-1996		
mesponse Component wave Elevation (ft)	Mean 0.39	Std dev 12.98	Max 50.68	Min -44.32	1/1000+ 48.69	1/1000- -47.92	Filter Fr(Hz)
Pitch (deg) Total Low Freq High Freq	-1.61 -1.61 -0.00	2.40 1.99 1.34	3.51 2.20 5.41	-11.55 -7.06 -5.99	7.31 5.79 4.98	-10.54 -9.02 -4.98	<.0300 >.0300
t Heave (ft) Total Low Freq High Freq	3.59 3.59 -0.00	5.91 4.47 3.88	33.76 19.58 17.00	-12.43 -10.96 -16.73	25.59 20.20 14.43	-18.41 -13.02 -14.43	<.0300 >.0300
	-19.37 -19.37 -0.00	15.98 15.53 3.74	26.01 23.24 16.54	-78.45 -67.52 -17.40	40.06 38.41 13.91	-78.80 -77.15 -13.91	<.0300 >.0300
ML-1 (kips) Total Low Freq High Freq	515.47 515.47 0.00	205.78 193.45 70.15	2818.10 2084.03 826.99	266.45 277.12 -717.07	1280.97 1235.11 260.97	-250.02 -204.17 -260.97	<.0300 >.0300
ML-2 (kips) Total Low Freq High Freq	278.49 278.49 -0.00	83.08 76.27 32.94	1270.39 800.04 483.87	118.87 126.94 -271.20	587.54 562.21 122.53	-30.56 -5.23 -122.53	<.0300 >.0300
BEX-1 (ft) Total Low Freq High Freq	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	<.0300 >.0300
BEX-2 (ft) Total Low Freq High Freq	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	<.0300 >.0300

High Freq

	RESPON	SE SUMMAR	RY, Fil	e: A551.0	csv 0	4-23-1996		
Response Comp	onent on (ft)	Mean 0.32	Std dev 5.13	Max 8.05	Min -7.45	1/1000+ 19.38	1/1000- -18.75	Filter Fr(Hz)
	Total w Freq h Freq	9.81 9.81 -0.00	9.30 9.27 0.64	24.00 24.04 4.23	-3.98 -3.43 -4.60	44.39 44.31 2.37	-24.77 -24.69 -2.37	<.0300 >.0300
	Total ow Freq gh Freq	-0.05 -0.05 0.00	0.61 0.51 0.33	1.24 0.82 0.59	-1.42 -0.93 -0.60	2.20 1.84 1.22	-2.31 -1.95 -1.22	<.0300 >.0300
	Total ow Freq gh Freq	1.74 1.74 0.00	1.14 1.04 0.48	4.55 4.01 0.81	-1.01 -0.37 -0.83	6.00 5.61 1.77	-2.51 -2.13 -1.77	<.0300 >.0300
L	Total ow Freq gh Freq	1879.24 1879.24 0.00	144.58 98.61 105.73	2194.35 2048.54 176.53	1521.28 1689.37 -180.35	2417.07 2246.07 393.32	1341.41 1512.42 -393.32	<.0300 >.0300
	Total ow Freq gh Freq	1837.60 1837.60 -0.00	104.95 72.78 75.61	2070.98 1966.43 120.86	1596.43 1703.44 -118.85	2228.01 2108.36 281.26	1447.20 1566.84 -281.26	<.0300 >.0300
	Total ow Freq gh Freq		53.72 53.53 4.54	413.91 405.65 22.67	241.75 245.18 -31.17	525.66 524.94 16.91	125.96 126.68 -16.91	<.0300 >.0300

RESPO	NSE SUMMAR	Y, Fi	le: A552.	CSV 0	4-23-1996		
Response Component Wave Elevation (ft)	Mean 0.26	Std dev 5.63	Max 8.35	Min -9.57	1/1000+ 21.22	1/1000- -20.70	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-7.35	3.17 3.03 0.95	-0.98 -2.29 2.66	-14.69 -14.67 -3.13	4.45 3.91 3.52	-19.14 -18.60 -3.52	<.0300 >.0300
Pitch Total Low Freq High Freq		0.59 0.23 0.55	1.32 0.44 0.89	-1.42 -0.62 -0.87	2.12 0.76 2.03	-2.28 -0.93 -2.03	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.24	1.51 0.82 1.27	4.70 2.88 1.97	-2.17 -0.59 -2.58	6.86 4.29 4.72	-4.37 -1.80 -4.72	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		109.92 30.52 105.60	2120.43 1995.12 153.43	1630.22 1818.88 -194.20	2306.67 2011.30 392.82	1488.87 1784.24 -392.82	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq		91.74 29.51 86.86	2050.19 1941.00 157.94	1665.71 1801.36 -149.09	2202.40 1970.89 323.13	1519.86 1751.37 -323.13	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	342.84	19.69 17.66 8.71	391.93 384.29 28.75	296.70 306.79 -24.75	416.08 408.52 32.40	269.60 277.16 -32.40	<.0300 >.0300

RESPO	NSE SUMMAR	RY, Fi	le: A553.	csv (	04-23-1996		
Response Component Wave Elevation (ft)	Mean 0.19	Std dev 8.03		Min -13.89	1/1000+ 30.06	1/1000- -29.68	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		3.74 2.97 2.26	1.00 -2.87 3.88	-18.11 -14.87 -3.67	4.87 2.03 8.42	-22.93 -20.09 -8.42	<.0300 >.0300
Pitch Total Low Freq High Freq		0.89 0.13 0.88	1.41 0.28 1.33	-1.80 -0.54 -1.46	3.11 0.26 3.29	-3.53 -0.68 -3.29	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.20	3.06 0.81 2.96	6.91 2.63 4.57	-4.36 -0.70 -4.76	12.60 4.20 10.99	-10.19 -1.79 -10.99	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		123.91 34.46 119.02	2139.88 1973.12 204.51	1579.64 1791.07 -240.65	2327.92 1995.18 442.75	1406.04 1738.78 -442.75	<.0300 >.0300
BT_3 (kips) Total Low Freq		117.10 31.07	2105.61 1939.86 201.43	1662.25 1772.86 -130.49	2288.21 1968.19 419.98	1417.02 1737.05 -419.98	<.0300 >.0300

443.22

44.01

307.69

333.40

-31.40

419.98 -419.98 >.0300

422.29 306.17 <.0300

71.24 -71.24 >.0300

272.32

456.14

High Freq 0.00 112.90 201.43 -130.49

Low Freq 364.23 15.61 400.54

24.71

19.15

ML\_1 (kips) Total 364.23

High Freq 0.00

RESPO	ISE SUMMAF	RY, Fil	Le: A554.	csv (	04-23-1996		
Response Component Wave Elevation (ft)	Mean 0.18	Std dev 8.32	Max 13.86	Min -13.33	1/1000+ 31.15	1/1000- -30.79	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		3.38 0.99 3.24	1.29 -3.06 5.11	-11.68 -7.09 -4.97	-1.49	-17.76 -8.84 -12.04	<.0300 >.0300
Pitch Total Low Freq High Freq		0.82 0.08 0.82	1.21 0.00 1.27	-1.64 -0.39 -1.33		-3.26 -0.48 -3.05	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		3.97 0.41 3.95	6.95 1.48 6.31	-5.89 -0.67 -6.16	2.09	-14.20 -0.97 -14.68	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1869.19	100.75 18.05 99.12	2069.85 1915.16 179.01	1735.26 1813.92 -117.52	1936.32	1494.40 1802.06 -368.72	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1847.41	103.43 16.88 102.04	2032.88 1887.32 172.09	1658.78 1801.03 -164.71	1910.21	1462.64 1784.61 -379.61	<.0300 >.0300
ML_1 (kips) Total Low Freq	336.00	26.46 6.80 25.57	384.61 346.25 41.40	289.37 321.15 -39.64	361.28	237.56 310.72 -95.14	<.0300 >.0300

RESPON	SE SUMMAR	Y, Fil	le: A555.	csv 0	4-23-1996		
Response Component Wave Elevation (ft)	Mean 0.06	Std dev 8.46	Max 11.92	Min -12.73	1/1000+ 31.51	1/1000- -31.40	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	2.43 2.43 0.00	5.83 4.39 3.83	16.92 10.40 6.85	-9.74 -3.96 -6.39	24.11 18.78 14.24	-19.25 -13.91 -14.24	<.0300 >.0300
Pitch Total Low Freq High Freq	0.06 0.06 -0.00	0.74 0.06 0.73	1.31 0.19 1.21	-1.13 -0.03 -1.25	2.80 0.28 2.73	-2.68 -0.16 -2.73	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.41 0.41 0.00	4.57 0.31 4.56	7.49 1.29 6.80	-6.75 -0.28 -6.79	17.40 1.57 16.95	-16.58 -0.76 -16.95	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		65.17 11.43 64.16	1992.04 1904.59 94.18	1750.83 1853.58 -114.51	2123.59 1923.68 238.68	1638.71 1838.63 -238.68	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq		82.94 12.00 82.07	1998.24 1882.40 127.53	1696.89 1828.45 -134.50	2160.90 1897.01 305.30	1543.81 1807.70 -305.30	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	312.12 312.12 -0.00	40.27 27.53 29.39	395.60 351.86 44.83	223.44 265.13 -44.53	461.91 414.53 109.32	162.32 209.70 -109.32	<.0300 >.0300

RESPON	ISE SUMMAR	Y, Fil	Le: A556B	.csv	04-23-1996	i	
Response Component Wave Elevation (ft)	Mean 0.33	Std dev 5.57	Max 26.65	Min -18.65	1/1000+ 21.04	1/1000- -20.37	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		8.37 8.32 0.84	15.68 15.13 7.54	-34.96 -32.94 -5.93	24.97 24.81 3.14	-37.28 -37.12 -3.14	<.0300 >.0300
Pitch Total Low Freq High Freq		1.36 1.29 0.44	3.55 2.98 1.60	-3.64 -3.35 -1.49	4.99 4.73 1.62	-5.12 -4.86 -1.62	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		4.04 3.93 0.96	13.68 11.92 3.69	-9.26 -8.65 -3.37	16.13 15.70 3.58	-13.95 -13.52 -3.58	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		255.59 232.16 106.89	2626.21 2457.84 428.33	1132.22 1227.72 -447.68		920.45 1007.60 -397.65	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1846.19	196.26 177.28 84.22	2472.78 2321.17 328.91	1256.98 1352.05 -319.44	2505.65	1116.09 1186.72 -313.28	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	354.42	65.36 64.64 9.69	743.58 705.86 66.50	216.11 230.42 -60.22	594.89	111.27 113.96 -36.03	<.0300 >.0300

RESPONSE SUMMARY, File: A557.CSV 04-23-1996

Response Component Wave Elevation (ft)	Mean -0.08	Std dev 10.82	Max 46.64	Min -41.59	1/1000+ 40.16	1/1000- -40.33	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-17.70	13.90 13.57 3.04	29.99 29.44 12.92	-55.86 -51.34 -14.29	34.02 32.76 11.33	-69.42 -68.16 -11.33	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.51	1.60 1.17 1.08	4.15 2.97 4.24	-8.10 -5.79 -4.70	5.44 3.86 4.03	-6.45 -4.88 -4.03	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.86	5.91 4.58 3.73	22.41 14.22 18.50	-19.52 -11.07 -16.43	23.84 18.90 13.88	-20.11 -15.17 -13.88	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		332.22 288.06 165.50	2820.74 2664.55 610.59	494.17 849.38 -675.97	3054.18 2889.91 615.65	582.49 746.75 -615.65	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1819.27	267.60 225.38 144.28	2753.35 2459.53 737.71	661.20 1119.58 -469.56	2814.76 2657.68 536.72	823.78 980.86 -536.72	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	465.27	169.17 156.74 63.65	1424.88 1192.36 404.83	139.19 143.35 -343.31	1094.57 1048.32 236.79	-164.04 -117.79 -236.79	<.0300 >.0300

RESPON	SE SUMMAR	, File:	A581.0	CSV 04	-23-1996		
Response Component Wave Elevation (ft)	Mean 0.27	Std dev 5.46	Max 8.11	Min -8.96	1/1000+ 20.60	1/1000- -20.06	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-3.62 -3.62 0.00	5.66 5.65 0.41	5.64 5.30 3.57	-12.22 -11.60 -2.19	17.44 17.39 1.54	-24.69 -24.64 -1.54	<.0300 >.0300
Pitch Total Low Freq High Freq	0.06 0.06 -0.00	0.42 0.13 0.40	0.94 0.37 0.62	-0.71 -0.18 -0.65	1.63 0.54 1.49	-1.50 -0.41 -1.49	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.71 0.71 -0.00	0.85 0.68 0.52	2.59 1.95 0.92	-1.13 -0.46 -0.96	3.87 3.22 1.92	-2.46 -1.81 -1.92	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	335.69 335.69 0.00		338.55 336.42 3.43	330.77 335.12 -5.27	342.15 336.66 6.38	329.23 334.72 -6.38	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	269.94 269.93 0.00		273.26 270.37 3.71	266.33 269.40 -3.64	273.01 270.62 3.00	266.86 269.24 -3.00	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	282.53 282.53 0.00	_ ,	329.67 322.83 9.38	234.43 240.06 -15.05	384.21 383.40 12.80	180.85 181.65 -12.80	<.0300 >.0300

RESPON	SE SUMMAR	f, File	: A582.0	CSV 04	1-23-1996		
Response Component Wave Elevation (ft)	Mean 0.17	Std dev 5.84	Max 8.54	Min -8.66	1/1000+ 21.89	1/1000- -21.56	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-7.16 -7.16 0.00	5.81 5.71 1.10	3.08 1.91 3.51	-17.12 -15.69 -3.85	14.46 14.07 4.10	-28.79 -28.39 -4.10	<.0300 >.0300
Pitch Total Low Freq High Freq	0.01 0.01 0.00	0.62 0.07 0.61	1.08 0.15 0.95	-1.07 -0.22 -0.97	2.31 0:27 2.28	-2.29 -0.24 -2.28	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.52 0.52 -0.00	1.45 0.38 1.40	3.32 1.26 2.25	-2.27 -0.25 -2.08	5.93 1.94 5.22	-4.89 -0.90 -5.22	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	335.57 335.57 0.00	1.67 0.33 1.63	338.55 336.45 3.81	330.77 334.66 -5.16	341.77 336.79 6.08	329.37 334.35 -6.08	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	270.25 270.25 0.00	1.18 0.27 1.14	273.26 271.11 3.44	269.79 269.81 -1.31	274.63 271.25 4.26	265.88 269.25 -4.26	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	278.56 278.56 0.00	28.36 26.85 9.12	336.99 321.82 20.48	223.44 234.11 -22.06	384.04 378.43 33.94	173.07 178.68 -33.94	<.0300 >.0300

RESPONSE SUMMARY, File: A583.CSV 04-23-1996

Response Component Wave Elevation (ft)	Mean 0.11	Std dev 8.02	Max 12.38	Min -12.75	1/1000+ 29.93	1/1000- -29.71	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-2.09 -2.09 0.00	3.40 2.21 2.58	5.29 1.55 4.39	-9.98 -5.71 -4.39	10.54 6.14 9.58	-14.73 -10.32 -9.58	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.04 -0.04 0.00	0.92 0.06 0.92	1.36 0.12 1.39	-1.45 -0.20 -1.41	3.40 0.18 3.43	-3.48 -0.27 -3.43	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.46 0.46 0.00	3.16 0.54 3.12	5.99 1.49 4.79	-4.75 -0.57 -4.81	12.23 2.47 11.60	-11.31 -1.56 -11.60	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	335.49 335.49 0.00	1.63 0.33 1.60	338.55 336.25 3.87	330.77 334.67 -5.16	341.56 336.71 5.95	329.42 334.27 -5.95	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	270.20 270.19 -0.00	1.15 0.26 1.12	273.26 270.99 3.42	266.33 269.40 -3.81	274.48 271.17 4.17	265.91 269.22 -4.17	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	281.71 281.71 -0.00	21.29 10.11 18.74	329.67 300.38 29.99	238.09 264.84 -30.64	360.91 319.33 69.70	202.50 244.08 -69.70	<.0300 >.0300

	RESPONS	E SUMMAR	Y, File	e: A584.0	csv 04	-23-1996		
Response Compo	onent n (ft)	Mean 0.10	Std dev 8.48	Max 13.03	Min -13.55	1/1000+ 31.66	1/1000- -31.46	Filter Fr(Hz)
	Total w Freq h Freq	-3.67 -3.67 0.00	4.40 2.59 3.56	7.82 2.46 6.05	-11.58 -6.49 -5.81	12.70 5.95 13.25	-20.05 -13.29 -13.25	<.0300 >.0300
	Total w Freq h Freq	-0.01 -0.01 -0.00	0.89 0.06 0.89	1.37 0.13 1.35	-1.41 -0.12 -1.35	3.32 0.20 3.32	-3.33 -0.22 -3.32	<.0300 >.0300
	Total w Freq h Freq	0.41 0.41 0.00	3.90 0.30 3.89	6.80 1.04 5.95	-5.67 -0.19 -6.02	14.92 1.51 14.47	-14.10 -0.69 -14.47	<.0300 >.0300
	Total w Freq h Freq	336.07 336.07 -0.00	1.89 0.40 1.84	338.55 337.22 3.40	330.77 335.04 -5.11	343.08 337,55 6.86	329.05 334.59 -6.86	<.0300 >.0300
	Total w Freq h Freq	269.30 269.30 -0.00	1.23 0.34 1.18	273.26 269.95 3.50	266.33 268.12 -3.60	273.88 270.55 4.40	264.72 268.04 -4.40	<.0300 >.0300
	Total w Freq	281.54 281.54 0.00	26.82 11.25 24.34	333.33 297.91 40.20	219.78 254.57 -38.37	381.30 323.40 90.55	181.78 239.67 -90.55	<.0300 >.0300

	RESPONS	E SUMMAR	Y, Fil	e: A585.C	SV 04	1-23-1996		
Response Comp Wave Elevation	onent on (ft)	Mean 0.03	Std dev 8.34	Max 11.70	Min -13.25	1/1000+ 31.05	1/1000- -30.98	Filter Fr(Hz)
	Total ow Freq gh Freq	2.63 2.63 -0.00	6.08 4.49 4.11	16.47 10.79 7.00	-9.74 -4.40 -7.31	25.27 19.33 15.29	-20.00 -14.06 -15.29	<.0300 >.0300
	Total ow Freq gh Freq	-0.07 -0.07 -0.00	0.78 0.04 0.78	1.25 0.05 1.26	-1.33 -0.15 -1.29	2.83 0.10 2.89	-2.96 -0.23 -2.89	<.0300 >.0300
	) Total ow Freq gh Freq	0.29 0.29 0.00	4.37 0.19 4.37	7.18 0.69 6.72	-6.47 -0.11 -6.53	16.56 1.00 16.26	-15.99 -0.43 -16.26	<.0300 >.0300
	10000	334.83 334.83 0.00	0.93 0.18 0.91	338.55 335.27 3.91	330.77 334.29 -4.03	338.27 335.49 3.38	331.39 334.17 -3.38	<.0300 >.0300
	Total ow Freq gh Freq	269.85 269.85 -0.00	0.67 0.16 0.65	273.26 270.25 3.56	266.33 269.49 -3.52	272.36 270.45 2.43	267.34 269.25 -2.43	<.0300 >.0300
	Total ow Freq gh Freq	276.28 276.28 0.00	33.76 20.28 26.99	347.98 310.87 42.82	201.46 239.91 -41.27	401.85 351.71 100.40	150.70 200.85 -100.40	<.0300 >.0300

RESPONSE SUMMARY, File: A586.CSV 04-23-1996

Response Component Wave Elevation (ft)	Mean 0.29	Std dev 5.52	Max 22.86	Min -19.89	1/1000+ 20.82	1/1000- -20.23	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-2.58 -2.58 0.00	6.18 6.12 0.82	15.19 14.08 2.63	-18.52 -16.17 -3.41	20.40 20.20 3.06	-25.56 -25.36 -3.06	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.11 -0.11 0.00	0.73 0.58 0.44	2.17 1.29 1.51	-2.44 -1.64 -1.45	2.61 2.04 1.65	-2.83 -2.27 -1.65	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.33 0.33 -0.00	2.82 2.63 1.02	10.24 7.84 4.05	-7.22 -6.72 -3.67	10.81 10.10 3.80	-10.15 -9.43 -3.80	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	334.06 334.06 0.00	1.51 0.46 1.44	338.55 335.26 5.16	330.77 332.62 -4.17	339.67 335.76 5.35	328.45 332.35 -5.35	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	268.26 268.26 0.00	1.73 0.98 1.42	273.26 270.01 3.74	262.86 266.17 -4.62	274.69 271.91 5.30	261.82 264.61 -5.30	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	300.17 300.17 0.00	32.31 31.66 6.45	391.93 375.94 24.37	212.45 223.71 -21.50	420.37 417.96 23.98	179.97 182.38 -23.98	<.0300 >.0300

RESPONSE	SUMMARY,	File:	A587.CSV	04-23-1996
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Response Component Wave Elevation (ft)	Mean -0.05	Std dev 10.73	Max 51.07	Min -41.28	1/1000+ 39.87	1/1000- -39.97	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-11.62 -11.62 0.00	12.57 12.16 3.18	25.49 25.03 14.91	-51.31 -45.78 -14.99	35.15 33.64 11.82	-58.39 -56.87 -11.82	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.17 -0.17 -0.00	1.44 0.99 1.05	7.12 4.03 4.09	-6.38 -3.36 -4.60	5.19 3.51 3.89	-5.54 -3.86 -3.89	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.70 0.70 -0.00	5.96 4.59 3.80	26.65 13.19 19.24	-19.29 -11.09 -17.03	22.87 17.78 14.12	-21.46 -16.38 -14.12	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	334.25 334.25 0.00	1.73 0.56 1.63	338.55 335.84 5.51	330.77 332.69 -4.36	340.68 336.33 6.08	327.83 332.17 -6.08	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	267.39 267.40 0.00	1.61 0.63 1.48	269.79 269.11 3.46	262.86 266.01 -4.14	273.38 269.74 5.51	261.40 265.05 -5.51	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	346.84 346.84 0.00	105.00 96.81 40.65	1065.92 836.07 325.03	120.88 123.23 -242.43	737.45 706.99 151.23	-43.77 -13.31 -151.23	<.0300 >.0300

RESPON	ISE SUMMARY	, File	: A593.0	CSV 04	1-24-1996		
Response Component Wave Elevation (ft)	Mean 0.18	Std dev 5.50	Max 8.28	Min -8.49	1/1000+ 20.63	1/1000- -20.27	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	0.68 0.68 -0.00	1.74 1.65 0.54	5.06 4.88 1.33	-2.72 -1.85 -2.18	7.15 6.83 2.01	-5.79 -5.46 -2.01	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.02 -0.02 0.00	0.42 0.15 0.39	1.03 0.48 0.66	-0.82 -0.39 -0.72	1.55 0.54 1.46	-1.58 -0.57 -1.46	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		1.00 0.85 0.51	3.16 2.42 0.96	-1.89 -0.98 -0.96	4.47 3.94 1.91	-2.95 -2.42 -1.91	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1477.92		1708.03 1564.53 171.21	1221.71 1382.14 -187.01	1912.48 1631.88 406.36	1043.38 1323.97 -406.36	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1425.06	22.00	1606.83 1500.42 130.54	1229.27 1344.92 -134.03	1766.75 1569.62 309.61	1083.36 1280.50 -309.61	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq		11.65 11.02 3.77	340.65 336.34 13.99	285.71 289.03 -12.33	361.20 358.87 14.01	274.53 276.86 -14.01	<.0300 >.0300

	RESPON	SE SUMMAR	Y, Fil	e: A594.0	CSV 0	4-24-1996		
Response Co Wave Elevat	mponent ion (ft)	Mean 0.15	Std dev 5.73	Max 7.92	Min -9.03	1/1000+ 21.47	1/1000- -21.18	Filter Fr(Hz)
	t) Total Low Freq igh Freq	-0.85 -0.85 -0.00	1.94 1.54 1.18	4.08 2.39 1.95	-5.36 -3.51 -1.88	6.38 4.89 4.39	-8.08 -6.59 -4.39	<.0300 >.0300
	Total Low Freq igh Freq	0.26 0.26 -0.00	0.67 0.25 0.62	1.76 0.97 0.98	-1.10 -0.38 -0.95	2.76 1.21 2.32	-2.24 -0.68 -2.32	<.0300 >.0300
	t) Total Low Freq igh Freq		1.50 0.59 1.38	4.28 2.37 2.11	-2.30 -0.65 -2.18	6.61 3.20 5.15	-4.58 -1.18 -5.15	<.0300 >.0300
	Total Low Freq Ligh Freq	1520.96	116.03 38.35 109.51	1723.59 1577.97 167.23	1252.83 1416.64 -183.35	1952.62 1663.63 407.39	1089.32 1378.30 -407.39	<.0300 >.0300
BT_3 (kips)	Total Low Freq High Freq	1456.70	88.70 29.41 83.68	1641.46 1527.41 135.68	1246.59 1381.47 -144.45	1566.10	1126.75 1347.29 -311.28	<.0300 >.0300
ML_1 (kips)	Total Low Freq High Freq	314.48	13.18 9.85 8.76	344.32 333.54 15.85	278.38 290.68 -15.10	351.11		<.0300 >.0300

RESPONSE SUMMARY, File: A595.CSV 04-24-1996

Response Component Wave Elevation (ft)	Mean 0.10	Std dev 8.03	Max 12.89	Min -12.97	1/1000+ 29.96	1/1000- -29.76	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		2.63 1.35 2.26	3.14 -0.01 3.97	-8.92 -5.71 -4.09	6.92 2.15 8.40	-12.64 -7.88 -8.40	<.0300 >.0300
Pitch Total Low Freq High Freq		2.54 2.39 0.87	5.17 3.92 1.46	-5.66 -4.53 -1.50	9.35 8.78 3.23	-9.57 -9.00 -3.23	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		3.47 1.66 3.05	9.70 5.23 4.61	-5.20 -1.36 -4.48	14.91 8.16 11.35	-10.94 -4.19 -11.35	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		403.81 377.28 143.97	2396.66 2232.06 361.24	443.59 850.66 -407.07	3046.34 2947.63 535.57	41.97 140.68 -535.57	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1448.82	320.03 293.60 127.34	2226.85 2093.65 323.85	602.32 847.21 -410.95	2639.33 2541.01 473.72	258.31 356.62 -473.72	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	330.58	20.66 8.87 18.66	377.28 350.19 32.71	285.71 309.72 -30.75	407.44 363.58 69.41	253.73 297.59 -69.41	<.0300 >.0300

RESPO	NSE SUMMAR	RY, Fi	le: A596.	CSV 0	4-24-1996		
Response Component Wave Elevation (ft)	Mean 0.11	Std dev 8.59		Min -14.72	1/1000+ 32.08		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		3.57 2.08 2.91	4.70 1.19 5.43	-12.52 -8.43 -4.98	9.22 3.66 10.81	-17.37 -11.81 -10.81	<.0300 >.0300
Pitch Total Low Freq High Freq		3.18 3.07 0.83		-6.25 -5.88 -1.93	11.72 11.31 3.08	-11.97 -11.56 -3.08	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	2.33	4.15 1.64 3.81	11.43 6.17 5.92	-6.44 -1.77 -5.90	17.75 8.44 14.16	-13.09 -3.77 -14.16	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1567.70	430.45 408.16 136.71	2431.68 2369.17 351.49	575.87 841.37 -388.39	3168.96 3086.06 508.55		<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1475.51	331.68 307.65 123.97	2164.50 2052.59 326.77	681.99 942.32 -343.65	2709.38 2619.96 461.16		<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	335.42	25.92 11.42 23.28	391.93 354.42 47.20	271.06 300.41 -39.29	431.86 377.88 86.59	238.98 292.95 -86.59	<.0300 >.0300

RESPON	NSE SUMMAR	RΥ, Fi	le: A597.	csv 0	4-24-1996		
Response Component Wave Elevation (ft)	Mean -0.03	Std dev 8.37	Max 11.54	Min -12.68	1/1000+ 31.11	1/1000- -31.17	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-3.00 -3.00 -0.00	3.46 0.70 3.38	3.42 -1.43 5.31		9.85 -0.41 12.59	-15.86 -5.60 -12.59	<.0300 >.0300
Pitch Total Low Freq High Freq		0.81 0.26 0.77	1.70 0.60 1.20	-1.61 -0.63 -1.22	2.94 0.90 2.85	-3.08 -1.04 -2.85	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	2.34	4.43 0.93 4.33	10.06 4.05 6.72	-5.18 0.47 -6.42	18.82 5.81 16.11	-14.14 -1.13 -16.11	<.0300 >.0300
BT_l (kips) Total Low Freq High Freq	1562.47	89.08 33.84 82.40	1766.39 1623.57 160.20	1307.30 1486.24 -182.49	1893.84 1688.33 306.54	1231.10 1436.60 -306.54	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1480.16	109.04 37.70 102.32	1710.74 1538.66 189.96	1205.02 1409.49 -211.79	1885.80 1620.39 380.63	1074.52 1339.93 -380.63	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	330.36	26.39 5.83 25.73	377.28 339.83 40.13	278.38 315.55 -38.94	428.52 352.05 95.73	232.21 308.67 -95.73	<.0300 >.0300

RESPON	ISE SUMMAR	RΥ, Fil	le: A598.	csv 0	4-24-1996		
Response Component Wave Elevation (ft)	Mean 0.25	Std dev 5.52	Max 23.90	Min -17.58	1/1000+ 20.78	1/1000- -20.28	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		5.39 5.33 0.78	12.19 11.12 2.61	-19.20 -17.72 -2.94	16.82 16.61 2.91	-23.27 -23.05 -2.91	<.0300 >.0300
Pitch Total Low Freq High Freq	0.05 0.05 0.00	1.10 1.02 0.42	3.27 3.01 1.53	-3.19 -2.50 -1.72	4.14 3.83 1.58	-4.05 -3.73 -1.58	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		3.39 3.24 0.99	11.95 9.66 3.74	-8.15 -7.98 -3.46	13.35 12.80 3.67	-11.84 -11.29 -3.67	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1498.54	222.31 196.13 104.66	2182.68 2100.70 478.14	665.36 958.28 -379.31	2325.53 2228.15 389.32	671.55 768.93 -389.32	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1416.25	175.54 153.12 85.85	1946.28 1847.15 386.69	799.76 1004.43 -379.85	2069.27 1985.84 319.37	763.23 846.65 -319.37	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	326.30	32.16 31.52 6.39	428.56 407.96 24.38	241.75 255.96 -22.30	445.93 443.54 23.76		<.0300 >.0300

RESPONSE SUMMARY, File: A599.CSV 04-24-1996

Response Component Wave Elevation (ft)	Mean -0.07	Std dev 10.73	Max 48.74	Min -40.34	1/1000+ 39.84	1/1000- -39.98	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-12.12	13.03 12.70 2.94	33.52 31.78 12.39	-55.08 -50.80 -13.29	36.36 35.11 10.93	-60.60 -59.35 -10.93	<.0300 >.0300
Pitch Total Low Freq High Freq		2.36 2.10 1.08	7.11 5.52 4.36	-8.82 -6.78 -4.64	8.45 7.49 4.00	-9.10 -8.13 -4.00	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	3.13	6.82 5.64 3.84	30.26 18.60 19.43	-18.97 -10.72 -17.22	28.50 24.09 14.29	-22.25 -17.84 -14.29	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1510.56	423.97 376.21 195.50	2704.02 2366.34 754.07	23.41 678.84 -878.28	3087.73 2910.06 727.25	-66.62 111.06 -727.25	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1425.32	348.53 299.43 178.36	2528.20 2231.22 845.09	103.53 747.89 -672.50	2721.83 2539.18 663.51	128.80 311.45 -663.51	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	398.21	127.99 119.59 45.61	1432.21 1181.45 388.39	135.53 141.58 -304.68	874.33 843.07 169.67	-77.91 -46.65 -169.67	<.0300 >.0300

RESPON	ISE SUMMAR	Y, File	e: A603.	csv c	4-25-1996		
Response Component Wave Elevation (ft)	Mean 0.40	Std dev 5.43	Max 8.46	Min -8.32	1/1000+ 20.61		
Pt Surge (ft) Total Low Freq High Freq	-15.71	12.34 12.30 0.87	5.43 5.42 7.36	-37.90 -38.37 -6.90	30.18 30.06 3.25	-61.60 -61.48 -3.25	<.0300 >.0300
Pitch Total Low Freq High Freq		0.48 0.30 0.37	1.15 0.60 0.66	-1.50 -0.90 -0.68	1.79 1.12 1.39	-1.77 -1.11 -1.39	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.75	1.13 0.97 0.58	4.56 3.63 1.29	-0.57 -0.01 -1.11	5.93 5.34 2.14		<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1685.82		1883.11 1789.14 96.33	1470.70 1551.44 -101.52	1918.39 1844.39 170.13	1453.25 1527.26 -170.13	<.0300 >.0300
BT_3 (kips) Total Low Freq	1583.82 1583.82	39.49	1710.74	1444.03 1477.36	1751.46 1730.72	1416.19 1436.93	

21.71

75.00

74.68

6.90

High Freq 0.00

High Freq 0.00

ML\_1 (kips) Total 313.98 Low Freq 313.98 51.43 -38.67

201.46

203.67

-43.58

498.16

486.51

50.76

80.77 -80.77 >.0300

592.98

25.67

34.99

591.79 36.17 <.0300

-25.67 >.0300

RESPO	ISE SUMMAR	RY, Fi	le: A604.	CSV 0	4-25-1996		
Response Component Wave Elevation (ft)	Mean 0.07	Std dev 5.45	Max 7.52	Min -8.77	1/1000+ 20.34	•	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	5.83 5.83 0.00	6.76 6.68 1.01	19.02 16.90 5.42	-8.06 -6.50 -5.31	30.96 30.68 3.75	-19.30 -19.02 -3.75	<.0300 >:0300
Pitch Total Low Freq High Freq		0.69 0.37 0.58	1.33 0.46 0.97	-1.78 -0.90 -1.09	2.35 1.18 2.15	-2.75 -1.57 -2.15	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		1.56 0.84 1.31	4.59 2.71 2.20	-2.12 -0.72 -2.02	6.89 4.22 4.88	-4.68 -2.00 -4.88	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1687.64	64.08 44.08 46.52	1871.44 1795.71 95.34	1517.39 1579.16 -77.49	1926.03 1851.62 173.04	1449.25 1523.67 -173.04	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1601.04	50.60 34.41 37.10	1741.92 1684.48 72.08	1475.20 1523.19 -65.14	1789.27 1729.05 138.00	1412.80 1473.02 -138.00	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	311.42	39.76 38.85 8.48	391.93 377.67 22.75	230.76 243.03 -30.60	459.34 455.94 31.54		<.0300 >.0300

RESPONSE SUMMARY, File: A605.CSV 04-25-1996

Response Component Wave Elevation (ft)		Std dev 7.71		Min -12.60	1/1000+ 28.75		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-1.21	3.24 2.34 2.25	5.76 2.48 3.70	-9.00 -6.02 -3.53	10.85 7.48 8.36	-13.26 -9.90 -8.36	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.71	0.94 0.23 0.91	1.13 -0.10 1.33	-2.49 -1.19 -1.40	2.77 0.15 3.37	-4.19 -1.57 -3.37	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.17	3.06 0.76 2.96		-4.56 -0.85 -4.36	12.56 4.00 11.03	-10.21 -1.66 -11.03	<.0300 >.0300
BT_l (kips) Total Low Freq High Freq	1659.70	72.43 25.24 67.89	1859.76 1753.28 152.90	1509.61 1588.82 -123.80	1929.15 1753.60 252.56	1390.25 1565.81 -252.56	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1574.09	62.26 20.22 58.88	1721.13 1649.24 96.72	1444.03 1524.02 -111.15	1805.68 1649.30 219.04	1342.49 1498.87 -219.04	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	325.19	21.70 12.14 17.99	369.96 346.69 29.17	278.38 302.27 -28.73	405.91 370.34 66.91	244.47 280.04 -66.91	<.0300 >.0300

RESPONSE SUMMARY, File: A606.CSV 04-25-1996

Response Component Wave Elevation (ft)	Mean 0.14	Std dev 8.32	Max 12.60	Min -12.53	1/1000+ 31.08	1/1000- -30.81	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		3.36 0.91 3.24	5.14 1.11 5.22	-7.86 -3.18 -4.89	11.23 2.11 12.04	-13.80 -4.68 -12.04	<.0300 >.0300
Pitch Total Low Freq High Freq		0.86 0.15 0.85	1.06 -0.15 1.26	-2.13 -0.93 -1.28	2.55 -0.11 3.16	-3.87 -1.21 -3.16	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.54	3.85 0.33 3.83	6.85 1.50 6.00	-5.41 -0.33 -5.65	14.84 1.77 14.25	-13.77 -0.69 -14.25	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1650.79	52.18 9.79 51.25	1754.72 1686.10 85.24	1529.06 1633.92 -116.03	1844.87 1687.19 190.65	1456.69 1614.38 -190.65	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1573.77	59.17 11.62 58.01	1672.64 1606.39 82.23	1447.49 1540.96 -103.47	1793.87 1617.00 215.82	1353.67 1530.54 -215.82	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	307.36	25.08 6.13 24.32	355.30 318.98 44.97	256.41 287.48 -37.56	400.67 330.14 90.49	214.04 284.57 -90.49	<.0300 >.0300

RESPO	NSE SUMMARY,	Fil	Le: A607.0	CSV 04	4-25-1996		
Response Component Wave Elevation (ft)	Mean St	td dev 8.39	Max 12.54	Min -13.26	1/1000+ 31.26	1/1000- -31.16	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		3.67 0.68 3.60	6.30 0.57 5.73	-7.05 -1.92 -5.81	12.41 1.29 13.40	-14.87 -3.74 -13.40	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.01	0.71 0.08 0.70	1.33 0.18 1.17	-1.23 -0.23 -1.12	2.61 0.28 2.61	-2.64 -0.30 -2.61	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.49	4.32 0.28 4.31	7.65 0.96 6.81	-5.99 -0.12 -6.27	16.58 1.55 16.05	-15.59 -0.57 -16.05	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1676.31	34.19 8.43 33.14	1743.05 1701.86 58.58	1599.09 1657.93 -74.98	1803.50 1707.67 123.27	1549.11 1644.96 -123.27	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1587.60	36.29 8.81 35.21	1669.17 1616.24 70.82	1520.23 1571.03 -55.08	1722.60 1620.36 130.96	1452.60 1554.85 -130.96	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	294.98	28.96 4.51 28.61	340.65 300.31 44.16	241.75 284.08 -43.29	402.71 311.75 106.42	187.24 278.20 -106.42	<.0300 >.0300

RESPO	NSE SUMMAR	Y, Fil	e: A608.0	sv 04	-25-1996		
Response Component Wave Elevation (ft)	Mean -0.12	Std dev 5.40	Max 22.29	Min -20.52	1/1000+ 19.97	1/1000- -20.21	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		7.90 7.86 0.87	8.30 7.49 6.71	-35.21 -33.84 -6.67	17.23 17.05 3.23	-41.58 -41.40 -3.23	<.0300 >.0300
Pitch Total Low Freq High Freq		1.18 1.10 0.43	3.31 2.80 1.45	-4.29 -3.28 -1.55	4.31 4.00 1.61	-4.50 -4.19 -1.61	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.83	4.30 4.19 0.94	12.22 10.67 3.42	-9.71 -8.35 -3.37	16.81 16.42 3.51	-15.15 -14.76 -3.51	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1666.66 1666.66 0.00	216.38 209.53 54.03	2314.96 2207.45 256.52	929.91 1050.88 -282.36	2471.60 2446.10 201.00	861.72 887.22 -201.00	<.0300 >.0300
BT_3 (kips) Total Low Free High Free	1566.65 1566.65 1 -0.00	187.46 182.54 42.68	2098.69 1998.02 221.91	976.41 1069.52 -193.52	2263.99 2245.68 158.78	869.30 887.61 -158.78	<.0300 >.0300
ML_1 (kips) Total Low Free High Free	322.04	48.94 48.27 8.02	512.81 467.68 63.41	186.81 200.95 -46.56	504.08 501.61 29.85	140.00 142.46 -29.85	<.0300 >.0300

RESPONSE	SUMMARY,	File:	A609.CSV	04-25-1996
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Response Component Wave Elevation (ft)		Std dev 10.90	Max 48.57	Min -42.15	1/1000+ 40.22		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-17.59	13.57 13.22 3.03	29.86 28.26 13.55	-56.78 -52.07 -14.50	32.87 31.60 11.26	-68.06 -66.78 -11.26	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.85	2.31 2.02 1.10	5.51 4.72 4.64	-9.37 -7.29 -4.91	7.73 6.69 4.11	-9.43 -8.38 -4.11	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	2.16	6.37 5.13 3.78	27.22 15.00 19.76	-13.64 -10.00 -17.45	25.87 21.24 14.07	-21.56 -16.93 -14.07	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		313.30 288.40 122.40	2688.46 2423.52 550.23	350.22 817.68 -741.01	2774.14 2681.52 455.32	443.17 535.79 -455.32	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1534.13	236.40 217.20 93.32	2251.10 2071.68 596.81	636.96 839.03 -336.46	2413.53 2342.10 347.16	654.73 726.16 -347.16	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	406.44	141.13 130.92 52.72	1336.97 1023.84 399.49	109.89 119.41 -357.63	931.46 893.46 196.10	-118.58 -80.57 -196.10	<.0300 >.0300

RESPON	ISE SUMMAR	Y, Fil	e: A703.	CSV 04	4-26-1996		
Response Component Wave Elevation (ft)	Mean 0.19	Std dev 5.47	Max 8.47	Min -9.15	1/1000+ 20.56	1/1000- -20.17	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-13.03 -13.03 0.00	10.12 10.10 0.67	4.61 3.67 1.88	-30.16 -29.02 -2.81	24.60 24.52 2.49	-50.67 -50.59 -2.49	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.02 -0.02 0.00	1.21 1.16 0.35	2.67 2.08 1.03	-2.41 -2.13 -1.24	4.48 4.29 1.29	-4.52 -4.34 -1.29	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.29 1.29 0.00	0.86 0.65 0.57	3.76 2.95 1.27	-0.94 -0.50 -1.09	4.49 3.69 2.11	-1.92 -1.12 -2.11	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	334.46 334.46 0.00	1.10 0.31 1.06	338.55 335.27 4.14	330.77 333.66 -4.26	338.56 335.61 3.94	330.35 333.30 -3.94	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	303.03 303.03 -0.00	1.70 0.52 1.62	304.43 304.24 2.41	300.97 302.02 -3.20	309.36 304.96 6.02	296.71 301.10 -6.02	<.0300 >.0300

ML\_1 (kips) Total 319.82 53.33 435.89 230.76 518.20 121.45 Low Freq 319.82 53.08 417.52 238.93 517.28 122.37 <.0300 High Freq 0.00 5.13 18.88 -17.07 19.08 -19.08 >.0300

RESPON	ISE SUMMAR	Y, Fil	e: A704.	CSV 04	1-26-1996		
Response Component Wave Elevation (ft)	Mean 0.16	Std dev 5.57	Max 8.77	Min -8.85	1/1000+ 20.87	1/1000- -20.55	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		5.14 5.03 1.06	14.70 13.95 4.92	-10.10 -8.45 -6.96	17.47 17.06 3.93	-20.76 -20.35 -3.93	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.06 -0.06 -0.00	0.52 0.24 0.46	1.25 0.58 0.92	-1.14 -0.70 -0.83	1.86 0.81 1.71	-1.99 -0.94 -1.71	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.72 1.72 -0.00	6.62 6.51 1.23	14.07 12.31 4.93	-9.52 -8.65 -4.45	26.35 25.92 4.57	-22.91 -22.49 -4.57	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	334.66	0.84 0.21 0.81	338.55 335.30 4.01	330.77 334.14 -3.92	337.79 335.46 3.03	331.52 333.86 -3.03	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq		1.06 0.23 1.04	304.43 301.85 3.43	297.50 300.80 -3.64	305.26 302.16 3.86	297.36 300.44 -3.86	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	341.16 341.16 0.00	36.79 35.88 8.11	421.24 405.66 23.05	245.42 257.28 -16.95	478.03 474.66 30.19	204.30 207.67 -30.19	<.0300 >.0300

RESPONSE	SUMMARY.	File:	A705.CSV	04-26-1996
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Response Component Wave Elevation (ft)	Mean 0.11	Std dev 7.93	Max 13.60	Min -13.90	1/1000+ 29.61	1/1000- -29.40	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-20.53 -20.53 0.00	3.01 2.06 2.19	-11.54 -14.43 3.66	-26.20 -23.06 -3.61	-9.35 -12.86 8.14	-31.71 -28.20 -8.14	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.33 -0.33 0.00	0.77 0.08 0.77	1.03 -0.08 1.17	-1.79 -0.56 -1.24	2.54 -0.02 2.85	-3.20 -0.64 -2.85	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	3.61 3.61 0.00	2.49 0.42 2.46	8.02 4.63 3.83	-0.94 2.18 -3.82	12.88 5.17 9.13	-5.66 2.05 -9.13	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	334.88 334.88 -0.00	1.16 0.28 1.12	338.55 335.64 3.98	330.77 334.37 -4.34	339.19 335.91 4.18	330.58 333.86 -4.18	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	300.30 300.30 0.00	1.37 0.31 1.33	300.97 300.91 1.68	297.50 299.29 -3.41	305.39 301.45 4.96	295.21 299.15 -4.96	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	450.09 450.09 -0.00	41.35 19.36 36.54	549.44 482.94 69.57	369.96 395.28 -61.56	603.93 522.11 135.94	296.25 378.07 -135.94	<.0300 >.0300

RESPONSE	SUMMARY.	File:	A706.CSV	04-26-1996
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RESPON	ISE SUMMAR	Υ, Fil	e: A706.	CSV (	04-26-1996		
Response Component Wave Elevation (ft)	Mean 0.10	Std dev 8.54	Max 14.02	Min -15.83	1/1000+ 31.88	1/1000- -31.69	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-17.13 -17.13 0.00	4.59 2.10 4.09	-8.73 -13.95 6.87	-30.12 -24.32 -6.70	-0.05 -9.33 15.20	-34.22 -24.94 -15.20	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.40 -0.40 -0.00	0.72 0.04 0.72	0.83 -0.29 1.15	-1.52 -0.51 -1.09	2.29 -0.25 2.68	-3.09 -0.55 -2.68	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	2.16 2.16 -0.00	3.69 0.30 3.68	8.56 3.35 5.82	-4.10 1.14 -5.85	15.88 3.29 13.67	-11.56 1.04 -13.67	<.0300 >.0300
BT_l (kips) Total Low Freq High Freq	335.44 335.44 0.00	1.62 0.34 1.59	338.55 336.33 3.89	330.77 334.66 -4.76	341.48 336.70 5.91	329.40 334.18 -5.91	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	297.41 297.41 0.00	0.64 0.17 0.62	300.97 297.77 3.48	294.04 296.71 -3.45	299.81 298.03 2.31	295.02 296.80 -2.31	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	436.46 436.46 0.00	56.72 23.83 51.48	670.32 534.79 136.51	362.63 405.81 -111.50	647.47 525.10 191.49	225.45 347.82 -191.49	<.0300 >.0300

RESPONSE	STIMMARY	File. A	707.CSV	04-26-1996
TENION SE	POLITITAL :	rite. A	./U/.C3V	04-20-1990

Response Component Wave Elevation (ft)	Mean -0.04	Std dev 8.53	Max 12.46	Min -13.28	1/1000+ 31.71	1/1000- -31.79	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-7.14 -7.14 0.00	5.23 2.03 4.82	5.98 -1.77 8.03	-17.42 -11.12 -7.19	12.30 0.40 17.92	-26.58 -14.68 -17.92	<.0300 >.0300
Pitch Total Low Freq High Freq	0.01 0.01 0.00	0.66 0.05 0.66	1.04 0.11 0.98	-1.13 -0.16 -1.02	2.47 0.20 2.46	-2.46 -0.18 -2.46	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.15 1.15 -0.00	4.78 0.17 4.77	8.42 1.78 7.32	-6.19 0.50 -7.06	18.92 1.79 17.76	-16.62 0.51 -17.76	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	337.59 337.59 0.00	1.68 0.43 1.62	338.55 338.44 2.34	334.66 336.21 -3.76	343.83 339.18 6.03	331.36 336.00 -6.03	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	294.59 294.59 -0.00	1.29 0.31 1.26	297.50 295.30 3.51	290.58 293.96 -4.35	299.40 295.75 4.67	289.77 293.43 -4.67	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	332.84 332.84 -0.00	34.94 10.61 33.29	410.25 353.80 56.53	256.41 304.82 -52.09	462.81 372.32 123.83	202.87 293.35 -123.83	<.0300 >.0300

RESPONSE	SUMMARY.	File:	A708.CSV	04-25-1996

RESPO	NSE SUMMAI	RY, Fil	e: A708.	CSV 0	4-25-1996		
Response Component Wave Elevation (ft)	Mean 0.11	Std dev 5.49	Max 24.36	Min -16.75	1/1000+ 20.52	1/1000- -20.31	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		10.49 10.45 0.92	33.78 32.43 6.61	-25.04 -23.59 -5.68	43.57 43.42 3.43	-34.50 -34.35 -3.43	
Pitch Total Low Freq High Freq	-0.09 -0.09 0.00	1.56 1.50 0.40	5.65 5.07 1.52	-4.80 -4.58 -1.34	5.70 5.51 1.49	-5.88 -5.69 -1.49	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.46	3.67 3.56 0.89	12.92 10.54 5.33	-8.20 -7.61 -2.89	15.12 14.71 3.32	-12.21 -11.80 -3.32	<.0300 >.0300
BT_l (kips) Total Low Freq High Freq	340.86	1.91 0.64 1.80	342.44 342.70 3.15	338.55 339.28 -3.89	347.97 343.23 6.70	333.76 338.49 -6.70	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq		1.72 0.98 1.41	276.72 276.71 3.37	269.79 271.58 -3.58	280.60 277.83 5.26	267.82 270.58 -5.26	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	362.20 362.20 -0.00	78.35 77.70 10.09	780.21 747.17 68.23	179.48 187.01 -57.62	653.67 651.24 37.53	70.74 73.16 -37.53	<.0300 >.0300

RESPON	ISE SUMMARY,	File: A709	.CSV 0	4-25-1996		
Response Component Wave Elevation (ft)	• • • • • • • • • • • • • • • • • • • •	d dev Max 10.91 44.90	Min -39.58	1/1000+ 40.62	1/1000- -40.57	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-32.11 2	20.62 33.08 20.36 30.86 3.26 14.67	-89.15 -83.86 -15.94	44.58 43.61 12.13	-108.81 -107.84 -12.13	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.39	2.12 5.95 1.86 4.76 1.01 4.17	-7.35 -6.03 -5.34	7.48 6.52 3.77	-8.26 -7.29 -3.77	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	3.69	5.78 32.07 4.58 18.16 3.53 19.47	-11.55 -9.16 -16.77	25.18 20.71 13.12	-17.80 -13.33 -13.12	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	339.94	1.93 342.44 0.96 342.72 1.67 4.64	334.66 337.11 -5.45	347.11 343.50 6.23	332.77 336.38 -6.23	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	278.10	2.34 283.65 1.96 281.21 1.27 5.44	269.79 273.31 -7.18	286.79 285.38 4.74	269.41 270.81 -4.74	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	687.14 34	53.37 3179.43 18.72 2065.34 02.13 1163.38	135.53 150.34 -726.32	2038.88 1984.39 379.94	-664.60 -610.10 -379.94	<.0300 >.0300

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Response Component Wave Elevation (ft)	Mean 0.23	Std dev 5.20	Max 7.49	Min -8.37	1/1000+ 19.56	1/1000- -19.10	
Pt Surge (ft) Total Low Freq	5.53 5.53	11.34 11.33	24.95 24.42	-14.60 -14.20	47.73 47.69	-36.67 -36.63	<.0300
High Freq	-0.00	0.46	3.70	-2.84	1.72	-1.72	>.0300
Pitch Total	-0.04	0.38	0.63 0.12	-0.71 -0.19	1.36 0.19	-1.44 $-0.27$	<.0300
Low Freq High Freq	-0.04 $0.00$	0.06 0.37	0.63	-0.60	1.38	-1.38	>.0300
Pt Heave (ft) Total	0.43	0.73	2.60	-1.40	3.15	-2.29	
Low Freq High Freq	0.43 0.00	0.54 0.49	1.83 1.03	-0.78 -1.45	2.45 1.83	-1.58 -1.83	<.0300 >.0300
BT_1 (kips) Total	354.00	0.83	358.00	350.22	357.08	350.93	
Low Freq High Freq	354.00 0.00	0.16 0.81	354.44 4.01	353.58 -3.93	354.58 3.02	353.42 -3.02	<.0300 >.0300
BT_3 (kips) Total	256.19	1.08	259.40	252.47	260.19	252.19	- 0000
Low Freq High Freq	256.19 0.00	0.24 1.05	256.79 3.46	255.59 -3.96	257.08 3.90	255.29 -3.90	<.0300 >.0300
ML_1 (kips) Total	360.36	73.21	538.45	245.42	632.69	88.03	
Low Freq High Freg	360.36 -0.00	72.97 5.94	526.06 20.13	250.92 -29.24	631.79 22.10	88.93 -22.10	<.0300 >.0300

RESPONSE SUMMARY, File: A803.CSV 04-29-1996

	RESPONSE	SUMMAR'	Y, File	: A804.CS	V 04	1-29-1996		
	Component ation (ft)	Mean 0.12	Std dev 5.63	Max 7.61	Min -9.41	1/1000+ 21.05	1/1000- -20.80	Filter Fr(Hz)
Pt Surge	(ft) Total Low Freq High Freq	4.20 4.20 -0.00	4.73 4.62 1.01	13.11 11.69 2.75	-6.00 -4.61 -3.55	21.80 21.39 3.77	-13.39 -12.98 -3.77	<.0300 >.0300
Pitch	Total Low Freq High Freq	-0.02 -0.02 0.00	0.44 0.05 0.44	0.83 0.16 0.73	-0.74 -0.11 -0.73	1.62 0.18 1.63	-1.67 -0.22 -1.63	<.0300 >.0300

Low Freq High Freq	0.19	0.28	0.93	-0.51 -1.85	1.22		<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	354.10	0.16	358.00 354.49 4.23	353.68	356.97 354.70 2.80	353.50	

1.36

0.19

Pt Heave (ft) Total

2.87

-2.21

5.24

-4.86

BT_3 (kips) Total Low Freq High Freq		0.29	257.81	256.34	263.13 258.10 6.00	255.96	<.0300
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ML_1 (kips) Total Low Freq High Freq	351.68	27.55	401.52	289.37 304.25 -17.81	454.15	249.21	<.0300
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RESPON	SE SUMMARY,	File	e: A805.C	sv 04	1-29-1996		
Response Component Wave Elevation (ft)	Mean S	td dev 8.04	Max 11.80	Min -12.18	1/1000+ 29.90	1/1000- -29.94	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-1.24 -1.24 -0.00	3.07 1.83 2.46	4.96 1.54 3.66	-8.61 -4.94 -3.91	10.16 5.57 9.15	-12.64 -8.05 -9.15	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.00 -0.00 -0.00	0.65 0.04 0.65	1.11 0.09 1.06	-1.04 -0.09 -1.00	2.43 0.14 2.43	-2.44 -0.15 -2.43	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.10 0.10 -0.00	3.05 0.19 3.04	5.17 0.73 4.86	-4.48 -0.23 -4.45	11.45 0.80 11.32	-11.24 -0.59 -11.32	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	354.07 354.07 -0.00	1.07 0.24 1.04	358.00 354.72 4.19	350.22 353.33 -4.21	358.04 354.96 3.86	350.11 353.17 -3.86	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	258.47 258.46 0.00	1.54 0.35 1.50	259.40 259.51 1.74	255.94 257.59 -3.51	264.19 259.78 5.57	252.74 257.15 -5.57	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	000170	24.18 11.56 21.24	410.25 377.46 34.31	307.69 337.00 -33.73	445.70 398.74 79.01	265.80 312.76 -79.01	<.0300 >.0300

RESPON	SE SUMMAF	RY, Fil	e: A806.0	CSV 04	4-29-1996		
Response Component Wave Elevation (ft)	Mean -0.03	Std dev 8.46	Max 12.81	Min -13.41	1/1000+ 31.43	1/1000- -31.50	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-0.16 -0.16 0.00	5.18 3.94 3.37	12.16 7.70 7.20	-11.15 -6.39 -5.32	19.12 14.49 12.53	-19.44 -14.82 -12.53	<.0300 >.0300
Pitch Total Low Freq High Freq	0.04 0.04 0.00	0.63 0.04 0.63	1.16 0.19 1.03	-0.92 -0.06 -0.99	2.38 0.20 2.33	-2.30 -0.12 -2.33	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.18 0.18 0.00	3.88 0.22 3.87	6.61 0.92 6.24	-5.69 -0.26 -5.67	14.60 1.00 14.40	-14.24 -0.65 -14.40	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	354.07 354.07 -0.00	0.76 0.16 0.74	358.00 354.56 4.04	350.22 353.69 -3.97	356.89 354.67 2.75	351.25 353.46 -2.75	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	259.21 259.21 -0.00	0.85 0.23 0.81	262.86 259.62 3.59	255.94 258.31 -3.45	262.36 260.05 3.03	256.07 258.37 -3.03	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	356.20 356.20 -0.00	36.52 24.09 27.44	443.22 392.46 51.38	274.72 306.85 -44.88	492.04 445.81 102.09	220.36 266.59 -102.09	<.0300 >.0300

RESPONSE	SUMMARY,	File:	A807.CSV	04-29-1996
NEBI ONEE	,			

Response Component Wave Elevation (ft)	Mean -0.07	Std dev 8.37	Max 11.46	Min -12.46	1/1000+ 31.07		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-2.25 -2.25 0.00	4.08 2.00 3.56	6.69 1.45 6.41	-10.83 -5.43 -5.78	12.94 5.18 13.25	-17.44 -9.67 -13.25	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.04 -0.04 0.00	0.51 0.03 0.51	0.85 0.06 0.83	-0.84 -0.10 -0.83	1.84 0.06 1.88	-1.93 -0.15 -1.88	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.23 0.23 -0.00	4.29 0.10 4.29	6.86 0.52 6.63	-6.14 0.02 -6.28	16.20 0.59 15.97	-15.74 -0.13 -15.97	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	354.06 354.06 0.00	0.63 0.13 0.62	358.00 354.46 3.88	350.22 353.70 -3.90	356.41 354.55 2.29	351.72 353.57 -2.29	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	260.14 260.14 -0.00	1.43 0.36 1.38	262.86 261.12 3.47	255.94 259.39 -4.46	265.44 261.49 5.13	254.83 258.79 -5.13	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	346.18 346.18 0.00	32.04 12.94 29.31	413.91 365.39 50.05	282.05 321.24 -44.84	465.37 394.31 109.04	226.98 298.04 -109.04	<.0300 >.0300

RESPON	SE SUMMARY	, Fil	e: A808.0	csv o	4-29-1996		
Response Component Wave Elevation (ft)	Mean 0.21	Std dev 5.58	Max 21.65	Min -19.47	1/1000+ 20.98	1/1000- -20.56	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-9.08 -9.08 -0.00	8.89 8.84 0.95	14.30 12.76 7.95	-33.83 -31.09 -6.68	23.98 23.79 3.53	-42.14 -41.95 -3.53	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.03 -0.03 0.00	0.57 0.42 0.38	1.71 1.21 1.35	-2.13 -1.42 -1.20	2.07 1.53 1.41	-2.14 -1.59 -1.41	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	-0.25 -0.25 0.00	2.29 2.06 1.01	5.53 4.70 3.90	-6.97 -5.87 -4.89	8.29 7.42 3.76	-8.78 -7.91 -3.76	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	353.83 353.82 -0.00	1.15 0.34 1.09	358.00 354.73 5.33	350.22 352.51 -4.21	358.10 355.09 4.07	349.57 352.56 -4.07	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	262.43 262.42 -0.00	1.17 0.31 1.13	266.33 263.22 3.73	259.40 261.24 -3.54	266.79 263.56 4.20	258.07 261.29 -4.20	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	398.62 398.62 -0.00	70.41 69.35 12.22	706.95 649.98 67.41	238.09 253.54 -68.18	660.57 656.59 45.46	136.68 140.66 -45.46	<.0300 >.0300

RESPO	NSE SUMMARY,	, Fi	le: A809.	CSV 0	4-29-1996		
Response Component Wave Elevation (ft)	Mean 5	Std dev 10.71	Max 45.56	Min -40.74	1/1000+ 39.61	1/1000- -40.08	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-19.89	15.38 15.00 3.43	36.28 35.00 15.02	-68.12 -63.66 -16.79	37.34 35.90 12.76	-77.12 -75.68 -12.76	<.0300 >.0300
Pitch Total Low Freq High Freq		1.01 0.50 0.88	3.23 0.97 3.55	-5.75 -2.39 -3.85	3.52 1.61 3.27	-3.98 -2.07 -3.27	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		4.64 2.75 3.74	18.61 7.23 18.60	-19.97 -8.34 -16.62	16.83 9.78 13.92	-17.71 -10.66 -13.92	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	353.47	1.72 0.80 1.52	358.00 355.43 6.05	346.33 350.25 -5.28	359.87 356.45 5.65	347.10 350.50 -5.65	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq		1.73 0.66 1.60	269.79 266.45 5.28	259.40 262.77 -5.14	271.28 267.31 5.95	258.41 262.38 -5.95	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	495.55	190.96 177.45 70.57	1772.86 1365.51 528.11	128.20 138.95 -472.75	1205.94 1155.65 262.51	-214.84 -164.55 -262.51	<.0300 >.0300

RESPON	ISE SUMMAR	Y, Fil	le: A903.	CSV 0	5-01-1996		
Response Component Wave Elevation (ft)	Mean 0.17	Std dev 5.57	Max 7.68	Min -9.21	1/1000+ 20.88	1/1000- -20.55	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-6.96 -6.96 -0.00	2.89 2.88 0.29	-2.11 -2.27 0.78	-11.51 -10.96 -0.70	3.79 3.73 1.09	-17.71 -17.66 -1.09	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.34 -0.34 -0.00	0.34 0.11 0.32	0.40 -0.10 0.53	-1.10 -0.62 -0.52	0.93 0.08 1.21	-1.62 -0.76 -1.21	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.81 0.81 0.00	0.88 0.62 0.62	2.99 2.17 1.34	-1.27 -0.42 -1.40	4.07 3.11 2.31	-2.45 -1.49 -2.31	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1666.76	60.36 14.37 58.63	1805.30 1706.50 119.67	1560.19 1629.39 -77.96	1891.31 1720.22 218.09	1442.22 1613.31 -218.09	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1671.63	43.98 12.83 42.06	1780.02 1700.74 90.63	1596.43 1643.84 -53.85	1835.23 1719.37 156.48	1508.02 1623.88 -156.48	<.0300 >.0300
ML_1 (kips) Total Low Freq	291.53	16.64 16.30 3.36	322.34 318.44 7.72	260.07 266.31 -8.23	353.44 352.16 12.52	229.62 230.90 -12.52	<.0300 >.0300

RESPO	NSE SUMMAF	RY, Fil	le: A904.	csv 0	5-01-1996		
Response Component Wave Elevation (ft)	Mean 0.10	Std dev 5.78	Max 7.98	Min -10.12	1/1000+ 21.60	1/1000- -21.39	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq		1.64 1.42 0.82	1.86 0.80 2.37	-6.02 -4.77 -2.02	4.76 3.95 3.05	-7.44 -6.62 -3.05	<.0300 >.0300
Pitch Total Low Freq High Freq		0.58 0.17 0.56	1.06 0.17 0.89	-1.48 -0.64 -0.88	2.03 0.49 2.07	-2.30 -0.77 -2.07	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		1.41 0.55 1.30	3.77 1.69 2.46	-1.90 -0.47 -2.42	5.83 2.61 4.84	-4.66 -1.45 -4.84	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1637.01	60.45 16.75 58.09	1801.40 1690.49 134.52	1536.84 1601.23 -78.46	1861.90 1699.31 216.09	1412.12 1574.71 -216.09	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1646.79	48.18 11.67 46.74	1780.02 1669.93 114.64	1558.33 1618.42 -70.07	1826.01 1690.22 173.87	1467.58 1603.37 -173.87	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	294.50	11.65 8.73 7.71	329.67 319.51 14.06	271.06 281.76 -17.81	337.84 326.97 28.70	251.16 262.02 -28.70	<.0300 >.0300

RESPO	NSE SUMMAR	RY, Fi	le: A905.	CSV 0	5-01-1996		
Response Component Wave Elevation (ft)	Mean 0.03	Std dev 8.12		Min -12.61	1/1000+ 30.25		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-6.60	3.14 2.02 2.40	0.82 -2.58 3.87	-14.23 -11.05 -4.07	5.08 0.92 8.94	-18.29 -14.13 -8.94	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.81	0.96 0.17 0.95	0.90 -0.33 1.46	-2.71 -1.38 -1.49	2.76 -0.19 3.52		
Pt Heave (ft) Total Low Freq High Freq	1.11	2.92 0.55 2.86	6.70 2.44 4.93	-3.90 0.12 -4.28	11.96 .3.16 10.66	-9.74 -0.94 -10.66	<.0300 >.0300
BT_l (kips) Total Low Freq High Freq	1646.73	97.54 14.20 96.50	1883.11 1689.61 218.29	1521.28 1622.82 -111.40	2009.60 1699.55 359.00	1283.87 1593.92 -359.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1632.75	76.68 12.80 75.60	1814.66 1666.67 150.10	1478.66 1611.43 -150.14	1917.99 1680.38 281.23	1347.52 1585.13 -281.23	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	323.82	21.56 12.73 17.40	373.62 347.55 29.44	271.06 295.19 -28.55	404.03 371.16 64.75	243.61 276.47 -64.75	<.0300 >.0300

RESPO	NSE SUMMARY	, Fi	le: A906.	CSV (	05-01-1996		
Response Component Wave Elevation (ft)	Mean -0.05	Std dev 8.63	Max 13.19	Min -13.22	1/1000+ 32.04	1/1000- -32.14	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-6.83 -6.83 -0.00	3.33 0.88 3.21	-1.03 -5.53 4.88	-13.44 -8.92 -4.69	5.58 -3.54 11.96	-19.23 -10.12 -11.96	<.0300 >.0300
Pitch Total Low Freq High Freq		0.89 0.14 0.88	0.86 -0.29 1.29	-2.35 -1.02 -1.34	2.55 -0.22 3.26	-4.06 -1.29 -3.26	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	0.40 0.40 0.00	3.75 0.23 3.75	6.88 0.94 6.39	-5.28 -0.13 -5.66		-13.56 -0.46 -13.94	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		72.52 13.67 71.22	1844.20 1687.47 170.03	1540.74 1626.37 -115.93	1932.66 1713.75 264.93	1393.13 1612.04 -264.93	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq		64.39 13.30 63.01	1762.70 1664.66 108.18	1471.74 1603.80 -148.87	1878.32 1688.24 234.38	1399.24 1589.32 -234.38	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	310.00	23.62 6.28 22.77	358.97 325.56 37.74	271.06 300.70 -35.66		222.12 286.62 -84.72	<.0300 >.0300

	RESPON	NSE SUMMAR	RY, Fil	Le: A907.	CSV 0	5-01-1996		
Response (	-	Mean -0.09	Std dev 8.53	Max 11.15	Min -12.59	1/1000+ 31.64	1/1000- -31.82	Filter Fr(Hz)
Pt Surge	(ft) Total Low Freq High Freq	-3.00 -3.00 -0.00	3.93 1.41 3.67	6.54 1.20 5.76	-9.41 -4.30 -6.10	11.62 2.25 13.65	-17.63 -8.25 -13.65	<.0300 >.0300
Pitch	Total Low Freq High Freq	-0.14 -0.14 0.00	0.71 0.10 0.70	1.22 0.06 1.17	-1.44 -0.43 -1.09	2.49 0.23 2.61	-2.77 -0.51 -2.61	<.0300 >.0300
Pt Heave	(ft) Total Low Freq High Freq	0.44 0.44 -0.00	4.40 0.20 4.40	7.47 0.89 7.20	-6.09 0.01 -6.28	16.82 1.19 16.36	-15.94 -0.31 -16.36	<.0300 >.0300
BT_1 (kip:	s) Total Low Freq High Freq		40.74 9.99 39.50	1715.81 1658.82 73.74	1548.52 1611.61 -73.36	1780.00 1665.58 146.94	1476.87 1591.29 -146.94	<.0300 >.0300

BT\_3 (kips) Total 1640.42 53.24 1752.31 1551.41 1838.47 1442.37 Low Freq 1640.42 8.72 1659.02 1617.73 1672.87 1607.98 <.0300 High Freq -0.00 52.52 108.62 -80.89 195.37 -195.37 >.0300

ML\_1 (kips)

Total 287.64 28.75 336.99 223.44 394.59 180.70 Low Freq 287.64 8.02 295.08 262.69 317.50 257.79 <.0300 High Freq -0.00 27.61 43.14 -45.46 102.70 -102.70 >.0300

RESPO	NSE SUMMAR	RY, Fil	le: A908.	CSV 0	5-01-1996		
Response Component Wave Elevation (ft)	Mean 0.21	Std dev 5.49	Max 21.69	Min -18.76	1/1000+ 20.64		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-4.62	8.16 8.12 0.74	19.39 17.74 2.91	-30.65 -29.29 -2.87	25.72 25.60 2.75	-34.97 -34.85 -2.75	<.0300 >.0300
Pitch Total Low Freq High Freq		1.02 0.92 0.42	2.48 2.06 1.50	-3.98 -3.06 -1.39	3.37 3.03 1.58	-4.18 -3.84 -1.58	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		3.08 2.92 1.00	10.65 9.49 3.78	-6.61 -5.57 -3.83	12.43 11.82 3.71	-10.50 -9.89 -3.71	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	1656.25	140.20 121.51 69.94	2116.54 1990.30 370.30	1233.38 1368.19 -251.04	2177.79 2108.26 260.18	1134.71 1204.25 -260.18	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	1645.38	110.16 96.55 53.04	2012.09 1928.78 279.38	1274.30 1432.62 -278.72	2055.16 2004.54 197.29	1235.60 1286.22 -197.29	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq		50.15 49.69 6.78	545.78 512.00 48.12	164.83 175.25 -41.64	483.82 482.11 25.20	110.67 112.39 -25.20	<.0300 >.0300

RESPON	ISE SUMMAR	Y, Fi	le: A909.	CSV 0	5-01-1996		
Response Component Wave Elevation (ft)	Mean -0.20	Std dev 10.96	Max 45.47	Min -41.68	1/1000+ 40.58	1/1000- -40.98	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-19.56 -19.56 -0.00	15.68 15.39 3.01	38.13 36.23 13.53	-65.94 -59.42 -14.95	38.78 37.69 11.21	-77.91 -76.82 -11.21	<.0300 >.0300
Pitch Total Low Freq High Freq	-1.51 -1.51 0.00	2.89 2.67 1.09	6.02 5.63 4.70	-13.15 -12.02 -5.22	9.22 8.42 4.07	-12.25 -11.45 -4.07	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	2.12 2.12 0.00	5.38 3.86 3.75	30.89 15.95 19.87	-12.54 -6.20 -17.30	22.13 16.49 13.93	-17.89 -12.24 -13.93	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq		260.63 224.11 133.07	2474.47 2335.89 474.12	894.90 1122.91 -467.11	2664.11 2528.23 495.00	725.00 860.89 -495.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq		211.00 177.36 114.30	2309.98 2233.64 376.05	820.54 1234.16 -619.15	2471.78 2346.63 425.20	901.93 1027.07 -425.20	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	404.16	171.64 162.08 56.50	1545.76 1269.91 453.68	76.92 87.32 -402.73	1042.67 1007.08 210.18	-234.35 -198.76 -210.18	<.0300 >.0300

RESPO	ise summar	RY, Fil	le: A1003	.csv	05-03-199	6	
Response Component Wave Elevation (ft)	Mean 0.11	Std dev 4.97		Min -9.75	1/1000+ 18.60		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-6.04 -6.04 0.00	16.59 16.58 0.52	22.27 22.27 3.75	-31.52 -31.21 -2.06	55.68 55.65 1.95	-67.75 -67.72 -1.95	<.0300 >.0300
Pitch Total Low Freq High Freq		0.91 0.84 0.34	2.50 2.08 1.28	-2.72 -2.19 -1.71	3.35 3.10 1.26	-3.39 -3.14 -1.26	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		1.18 1.00 0.63	4.75 3.85 1.44	-1.06 -0.40 -1.36	5.59 4.92 2.34	-3.21 -2.54 -2.34	
BT_1 (kips) Total Low Freq High Freq	9605.97	0.08 0.08 0.00	9605.90 9605.90 0.00	9605.90 9605.90 0.00	9606.25 9606.25 0.00	9605.70 9605.70 0.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	8731.97	0.07 0.07 0.00	8731.90 8731.90 0.00	8731.90 8731.90 0.00	8732.24 8732.24 0.00	8731.71 8731.71 0.00	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	288.74	89.73 89.61 4.50		146.52 151.63 -18.29			<.0300 >.0300

RESPON	ISE SUMMAR	Y, Fil	Le: A1004	.csv	05-03-1996	5	
Response Component Wave Elevation (ft)	Mean 0.20	Std dev 5.48	Max 8.09	Min -8.92	1/1000+ 20.57	1/1000- -20.17	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-4.03 -4.03 -0.00	7.16 7.07 1.12	8.07 6.58 6.31	-17.99 -16.68 -5.53	22.61 22.28 4.15	-30.67 -30.34 -4.15	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.10 -0.10 -0.00	0.53 0.08 0.53	1.03 0.10 1.02	-1.22 -0.28 -1.12	1.89 0.20 1.96	-2.08 -0.39 -1.96	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	2.01 2.01 0.00	1.50 0.85 1.24	5.55 3.78 2.47	-0.78 0.61 -2.11	7.60 5.18 4.60	-3.57 -1.15 -4.60	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	9605.97	0.08 0.08 0.00	9605.90 9605.90 0.00	9605.90 9605.90 0.00	9606.25 9606.25 0.00	9605.70 9605.70 0.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	8731.97	0.07 0.07 0.00	8731.90 8731.90 0.00	8731.90 8731.90 0.00	8732.24 8732.24 0.00	8731.71 8731.71 0.00	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq		35.00 34.29 7.01	377.28 361.32 35.98	238.09 244.64 -26.69	431.08 428.44 26.08	170.71 173.35 -26.08	<.0300 >.0300

RESPON	ISE SUMMAR	Y, Fil	e: A1005	.csv	05-03-1996	5	
Response Component Wave Elevation (ft)	Mean 0.03	Std dev 6.20	Max 8.24	Min -9.56	1/1000+ 23.09		
Pt Surge (ft) Total Low Freq High Freq	-3.36 -3.36 -0.00	4.64 3.70 2.79	8.72 5.84 7.60	-12.75 -9.11 -5.46	13.89 10.42 10.39	-20.61 -17.13 -10.39	<.0300 >.0300
Pitch Total Low Freq High Freq		0.62 0.06 0.62	1.10 0.05 1.17	-1.26 -0.22 -1.26	2.21 0.12 2.29	-2.39 -0.30 -2.29	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		2.99 0.28 2.98	5.55 1.27 4.73	-4.24 -0.21 -4.96		-10.40 -0.30 -11.08	
BT_1 (kips) Total Low Freq High Freq	9605.97	0.08 0.08 0.00	9.605.90 9605.90 0.00	9605.90 9605.90 0.00	9606.25 9606.25 0.00	9605.70 9605.70 0.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	8731.97	0.07 0.07 0.00	8731.90 8731.90 0.00	8731.90 8731.90 0.00	8732.24	8731.71 8731.71 0.00	<.0300 >.0300
ML_l (kips) Total Low Freq High Freq	288.36	25.07 16.79 18.62	340.65 314.27 29.73	219.78 243.04 -31.59	350.84		<.0300 >.0300

RESPO	NSE SUMMAR	Y, Fi	Le: A1006	.csv	05-03-199	6	
Response Component Wave Elevation (ft)	Mean -0.01	Std dev 8.43		Min -14.85	1/1000+ 31.37		Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-9.54 -9.54 -0.00	4.81 3.07 3.70	3.70 -1.97 6.68	-19.76 -14.04 -6.33	8.35 1.88 13.77	-27.43 -20.96 -13.77	<.0300 >.0300
Pitch Total Low Freq High Freq		0.84 0.05 0.84	1.38 0.04 1.43	-1.60 -0.21 -1.53	3.02 0.10 3.11	-3.21 -0.28 -3.11	
Pt Heave (ft) Total Low Freq High Freq		3.80 0.32 3.79	7.21 2.02 6.11	-4.89 0.20 -5.74	15.20 2.26 14.09	-13.09 -0.15 -14.09	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	9605.97	0.08 0.08 0.00	9605.90 9605.90 0.00	9605.90 9605.90 0.00	9606.25 9606.25 0.00	9605.70 9605.70 0.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	8731.97	0.07 0.07 0.00	8731.90 8731.90 0.00	8731.90 8731.90 0.00	8732.24 8732.24 0.00	8731.71 8731.71 0.00	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	315.75	28.39 14.74 24.26	373.62 335.91 39.76	245.42 280.25 -38.79	370.59	210.13 260.90 -90.26	<.0300 >.0300

RESPON	ISE SUMMAR	Y, Fil	le: A1007	.csv	05-03-1996	;	
Response Component Wave Elevation (ft)	Mean -0.14	Std dev 8.60	Max 11.56	Min -13.93	1/1000+ 31.85	1/1000- -32.12	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-1.66 -1.66 -0.00	4.49 1.79 4.11	7.89 2.41 7.22	-12.35 -5.00 -8.28	15.03 5.02 15.29	-18.34 -8.33 -15.29	<.0300 >.0300
Pitch Total Low Freq High Freq	0.02 0.02 -0.00	0.75 0.05 0.74	1.41 0.13 1.34	-1.31 -0.09 -1.38	2.79 0.21 2.77	-2.76 -0.18 -2.77	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq		4.38 0.27 4.37	7.57 1.00 6.98	-6.51 -0.48 -6.51		-16.00 -0.73 -16.26	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	9605.97	0.08 0.08 0.00	9605.90 9605.90 0.00	9605.90 9605.90 0.00	9606.25 9606.25 0.00	9605.70 9605.70 0.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	8731.97	0.07 0.07 0.00	8731.90 8731.90 0.00	8731.90 8731.90 0.00	8732.24	8731.71 8731.71 0.00	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	271.06	29.48 8.59 28.20	329.67 288.71 45.33	208.79 247.77 -46.85	303.03		<.0300 >.0300

DESD	ONSE SUMMAR	v Fi	le: A1008	. CSV	05-03-199	5	
RESIC	MSE SOME	1, 1					
Response Component	Mean	Std dev	Max	Min	1/1000+	1/1000-	Filter
Wave Elevation (ft)		5.23	19.92	-16.59	19.71	-19.23	Fr(Hz)
			15.04	40 40	00.00	40 15	
Pt Surge (ft) Total			15.84		29.20	-48.15	
Low Fred		10.35	14.43	-40.66			<.0300
High Fred	1 0.00	0.97	3.61	-3.11	3.61	-3.61	>.0300
Pitch Total	-0.10	1.37	3.45	-4.57	4.97	-5.18	
Low Fred		1.29	3.05	-3.40	4.69		<.0300
	4	0.45	1.88	-1.88	1.68	-1.68	>.0300
High Fred	4 -0.00	0.43	1.00	1,.00	1.00	1.00	×.0300
Pt Heave (ft) Total	1.26	3.93	14.75	-8.84	15.87	-13.36	
Low Fred		3.81	13.08	-8.62	15.44	-12.93	<.0300
High Fred	4	0.95	3.90	-3.46	3.53	-3.53	>.0300
				2625 22	0.505 44	0604 05	
BT 1 (kips) Total	L 9605.70	0.20	9605.90	9605.90	9606.44	9604.95	
Low Fred	9605.70	0.20	9605.90	9605.90	9606.44		<.0300
	0.00	0.00	0.00	0.00	0.00	0.00	>.0300
nm o (lutura) Matal	0721 00	0.09	8731.90	8731.90	8732.33	8731.65	
BT_3 (kips) Total	0731.99	0.09	8731.90	8731.90	8732.33	8731.65	<.0300
	8731.99						
High Fred	1 0.00	0.00	0.00	0.00	0.00	0.00	>.0300
ML 1 (kips) Total	L 311.19	69.42	677.64	164.83	569.41	52.96	
Low Fred	311.19	69.03	640.10	177.64	567.97	54.41	<.0300
High Free		7.34	48.31	-49.52	27.30	-27.30	>.0300

RESPO	05-03-199	6					
Response Component Wave Elevation (ft)	Mean -0.13	Std dev 11.11	Max 48.41	Min -40.00	1/1000+ 41.21	1/1000- -41.48	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-16.03	20.73 17.87 10.51	62.41 44.97 41.20	-65.65 -58.01 -41.37	61.10 50.46 39.09	-93.16 -82.52 -39.09	<.0300 >.0300
Pitch Total Low Freq High Freq	-2.97	4.64 3.48 3.07	4.06 3.45 11.06	-22.54 -13.76 -12.06	14.29 9.97 11.42	-20.24 -15.92 -11.42	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	4.25	6.28 4.73 4.13	38.83 17.79 22.75	-15.14 -9.28 -19.17	27.62 21.86 15.36	-19.12 -13.36 -15.36	<.0300 >.0300
BT_1 (kips) Total Low Freq High Freq	9605.70	0.20 0.20 0.00	9605.90 9605.90 0.00	9605.90 9605.90 0.00		9604.95 9604.95 0.00	<.0300 >.0300
BT_3 (kips) Total Low Freq High Freq	8731.99	0.09 0.09 0.00	8731.90 8731.90 0.00	8731.90 8731.90 0.00	8732.33 8732.33 0.00	8731.65 8731.65 0.00	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	474.58	200.50 189.68 64.99	1531.11 1258.26 424.89	95.24 101.77 -386.48	1220.45 1180.18 241.76	-271.29 -231.02 -241.76	<.0300 >.0300

	RESPONSE	SUMMAR!	Υ,	File:	A1103.	csv	05-06-1996		
Response Comp Wave Elevation		Mean 0.10	Std o		Max 8.46	Min -8.98	1/1000+ 20.71	1/1000- -20.51	Filter Fr(Hz)
	w Freq	2.66 2.66 -0.00	3.3 3.3 0.2	38	8.44 8.24 1.00	-2.93 -2.66 -0.87	15.26 15.24 0.77	-9.94 -9.92 -0.77	<.0300 >.0300
	w Freq	-0.04 -0.04 -0.00	0.3 0.0 0.3	04	0.58 0.05 0.59	-0.72 -0.14 -0.63	1.41 0.12 1.44	-1.49 -0.20 -1.44	<.0300 >.0300
	Total w Freq h Freq	0.61 0.61 0.00	0.8 0.5	53	2.27 1.60 1.29	-1.10 -0.29 -1.36	3.61 2.58 2.26	-2.40 -1.37 -2.26	<.0300 >.0300
		14.36 14.36 0.00	16.1 15.9 2.9	92 3	44.32 41.00 7.20	282.05 285.87 -6.77	374.56 373.57 10.90	254.16 255.15 -10.90	<.0300 >.0300

	RESPON	SE SUMMAR	Y, File:	A1104	.csv	05-06-1996		
-	Component vation (ft)	Mean 0.10	Std dev 6.10	Max 7.87	Min -9.33	1/1000+ 22.79	1/1000- -22.59	Filter Fr(Hz)
Pt Surge	(ft) Total Low Freq High Freq	-1.95 -1.95 -0.00	1.55 1.38 0.71	2.12 0.70 1.43	-5.77 -4.81 -1.38	3.83 3.18 2.66	-7.73 -7.08 -2.66	<.0300 >.0300
Pitch	Total Low Freq High Freq	-0.01 -0.01 0.00	0.53 0.03 0.53	0.82 0.12 0.82	-0.90 -0.07 -0.85	1.97 0.09 1.98	-1.99 -0.11 -1.98	<.0300 >.0300
Pt Heave	(ft) Total Low Freq High Freq	0.03 0.03 0.00	1.36 0.10 1.35	2.50 0.24 2.40	-2.02 -0.24 -1.97	5.07 0.39 5.03	-5.02 -0.34 -5.03	<.0300 >.0300
ML_1 (kip	os) Total Low Freq High Freq	311.45 311.45 -0.00	6.29 3	36.99 24.18 16.27	285.71 299.01 -16.35	351.08 334.86 31.97	271.83 288.04 -31.97	<.0300 >.0300

	RESPON	SE SUMMAR	xy, Fil	e: A1105	.csv	05-06-1996		
	Component ration (ft)	Mean -0.07	Std dev 8.22	Max 11.75	Min -12.29	1/1000+ 30.50	1/1000- -30.64	Filter Fr(Hz)
Pt Surge	(ft) Total Low Freq High Freq	-3.71 -3.71 -0.00	2.34 0.70 2.24	0.94 -2.36 3.37	-8.11 -4.82 -3.54	5.01 -1.08 8.32	-12.42 -6.33 -8.32	<.0300 >.0300
Pitch	Total Low Freq High Freq	0.06 0.06 -0.00	0.83 0.02 0.83	1.30 0.13 1.23	-1.23 0.00 -1.26	3.16 0.15 3.10	-3.04 -0.03 -3.10	<.0300 >.0300
Pt Heave	(ft) Total Low Freq High Freq	0.63 0.63 0.00	3.16 0.36 3.14	6.26 1.33 5.19	-4.46 -0.20 -4.92	12.40 1.98 11.69	-11.14 -0.72 -11.69	<.0300 >.0300
ML_1 (kir	os) Total Low Freq High Freq	311.82 311.82 -0.00	19.28 3.27 19.00	347.98 317.56 30.69	278.38 304.79 -30.22	383.53 323.98 70.67	240.11 299.66 -70.67	<.0300 >.0300

	RESPON	SE SUMMAR	Y, Fil	e: All06	.csv	05-06-1996		
Response Wave Elev	Component ation (ft)	Mean -0.07	Std dev 8.81	Max 14.14	Min -14.38	1/1000+ 32.70	1/1000- -32.84	Filter Fr(Hz)
Pt Surge	(ft) Total Low Freq High Freq	-3.20 -3.20 0.00	3.79 1.30 3.56	3.49 -1.23 5.47	-10.99 -5.79 -5.76	10.89 1.65 13.23	-17.29 -8.05 -13.23	<.0300 >.0300
Pitch	Total Low Freq High Freq	0.04 0.04 0.00	0.86 0.03 0.86	1.34 0.11 1.33	-1.25 -0.09 -1.26	3.23 0.15 3.19	-3.15 -0.07 -3.19	<.0300 >.0300
Pt Heave	(ft) Total Low Freq High Freq	0.49 0.49 -0.00	3.96 0.24 3.96	7.05 0.88 6.33	-5.54 0.06 -5.76	15.24 1.39 14.72	-14.26 -0.40 -14.72	<.0300 >.0300
ML_1 (kip	s) Total Low Freq High Freq	312.54 312.54 0.00	25.59 5.66 24.96	362.63 323.97 39.33	267.39 303.16 -39.77	407.75 333.59 92.85	217.34 291.50 -92.85	<.0300 >.0300

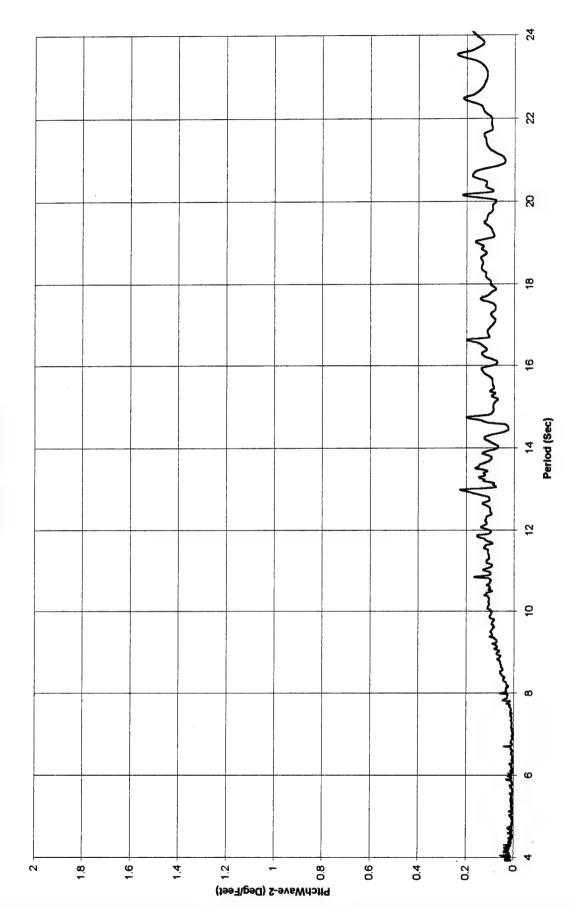
	Y, File	e: Al107	.csv	05-06-1996				
Response Co Wave Elevat	-	Mean -0.12	Std dev 8.67	Max 11.87	Min -13.81	1/1000+ 32.13	1/1000- -32.36	Filter Fr(Hz)
	t) Total Low Freq igh Freq	-1.17 -1.17 -0.00	4.06 0.40 4.04	6.13 0.21 6.22	-7.64 -1.68 -6.58	13.93 0.31 15.03	-16.28 -2.65 -15.03	<.0300 >.0300
	Total Low Freq igh Freq	0.04 0.04 -0.00	0.73 0.02 0.73	1.17 0.11 1.12	-1.12 -0.03 -1.14	2.75 0.14 2.71	-2.67 -0.05 -2.71	<.0300 >.0300
	t) Total Low Freq igh Freq	0.45 0.45 0.00	4.32 0.15 4.32	7.62 0.87 7.18	-6.11 -0.00 -6.32	16.51 1.00 16.06	-15.61 -0.10 -16.06	<.0300 >.0300
	Total Low Freq igh Freq	303.98 303.98 0.00	27.90 2.10 27.83	347.98 307.37 41.69	256.41 296.30 -42.21	407.79 311.79 103.51	200.18 296.18 -103.51	<.0300 >.0300

RESPONSE SUMMARY,			RY, Fil	File: Al108.CSV			05-06-1996	
Response Component Wave Elevation (ft)		Mean 0.21	Std dev 5.62	Max 21.36	Min -18.84	1/1000+ 21.10	1/1000- -20.69	Filter Fr(Hz)
Pt Surge	(ft) Total Low Freq High Freq	-6.30 -6.30 -0.00	6.97 6.93 0.72	13.30 11.81 4.42	-26.13 -23.80 -3.60	19.62 19.48 2.67	-32.22 -32.08 -2.67	<.0300 >.0300
Pitch	Total Low Freq High Freq	0.03 0.03 0.00	0.61 0.45 0.41	1.92 1.38 1.84	-2.57 -1.41 -1.27	2.29 1.71 1.51	-2.23 -1.65 -1.51	<.0300 >.0300
Pt Heave	(ft) Total Low Freq High Freq	0.84 0.84 -0.00	2.23 1.97 1.04	9.80 7.16 4.27	-5.10 -4.14 -4.13		-7.45 -6.50 -3.86	<.0300 >.0300
ML_1 (kir	os) Total Low Freq High Freq	326.48 326.48 -0.00	38.52 37.79 7.48	520.14 467.99 54.34	216.11 230.60 -44.90		183.17 185.90 -27.84	<.0300 >.0300

RESPO	05-06-1996	5					
Response Component Wave Elevation (ft)	Mean -0.22	Std dev 11.25	Max 44.41	Min -42.12	1/1000+ 41.64	1/1000- -42.09	Filter Fr(Hz)
Pt Surge (ft) Total Low Freq High Freq	-13.79	13.30 12.93 3.14	31.67 31.29 14.37	-56.74 -51.58 -14.94	35.69 34.29 11.69	-63.28 -61.88 -11.69	<.0300 >.0300
Pitch Total Low Freq High Freq	-0.18	1.20 0.62 1.02	3.61 1.21 4.02	-5.41 -2.00 -4.29	4.26 2.14 3.79	-4.63 -2.50 -3.79	<.0300 >.0300
Pt Heave (ft) Total Low Freq High Freq	1.17	5.20 3.36 3.97	26.54 11.62 19.84	-19.12 -8.21 -17.64	20.53 13.67 14.78	-18.18 -11.32 -14.78	<.0300 >.0300
ML_1 (kips) Total Low Freq High Freq	389.23	128.92 118.63 50.46	1336.97 1015.64 422.45	113.55 121.73 -338.05	868.79 830.53 187.72	-90.34 -52.08 -187.72	<.0300 >.0300

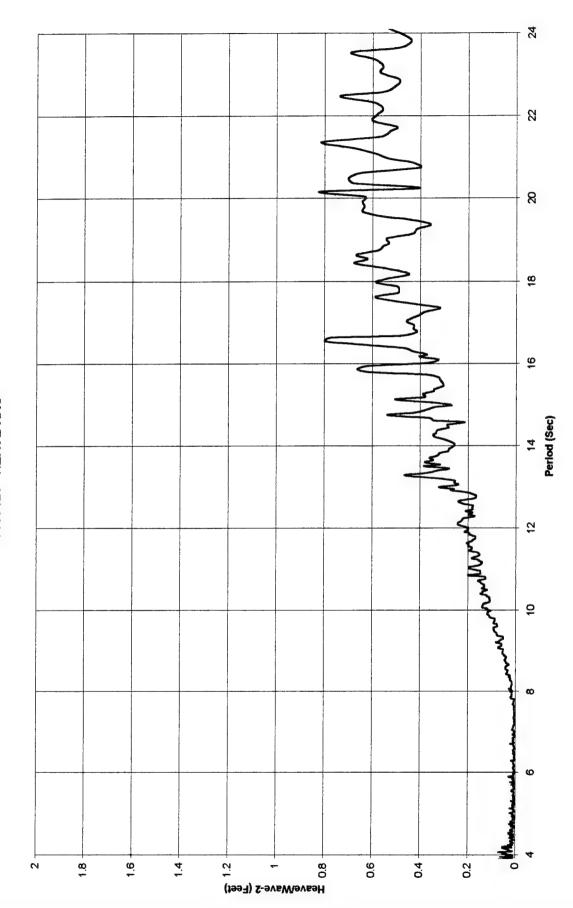
## APPENDIX G RAO PLOTS

Test 121 - PITCH RAO

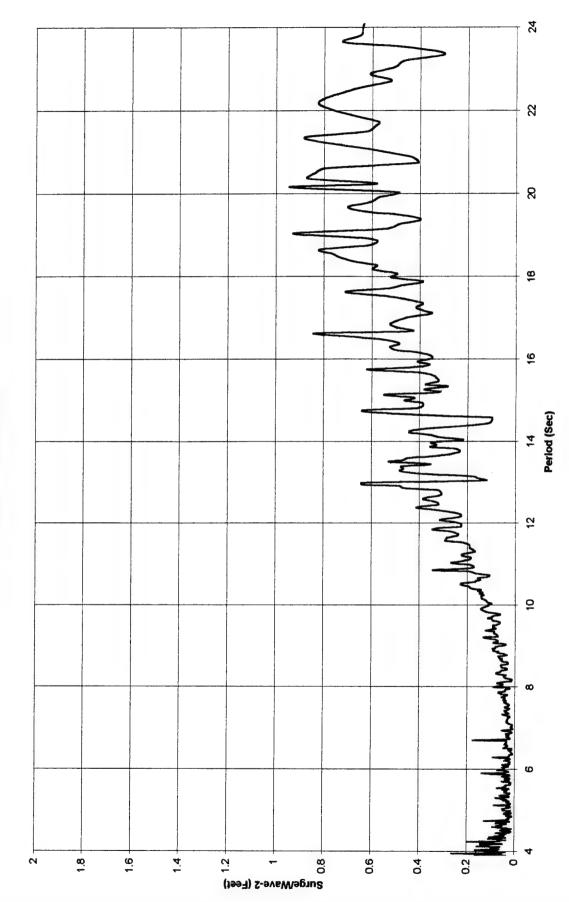


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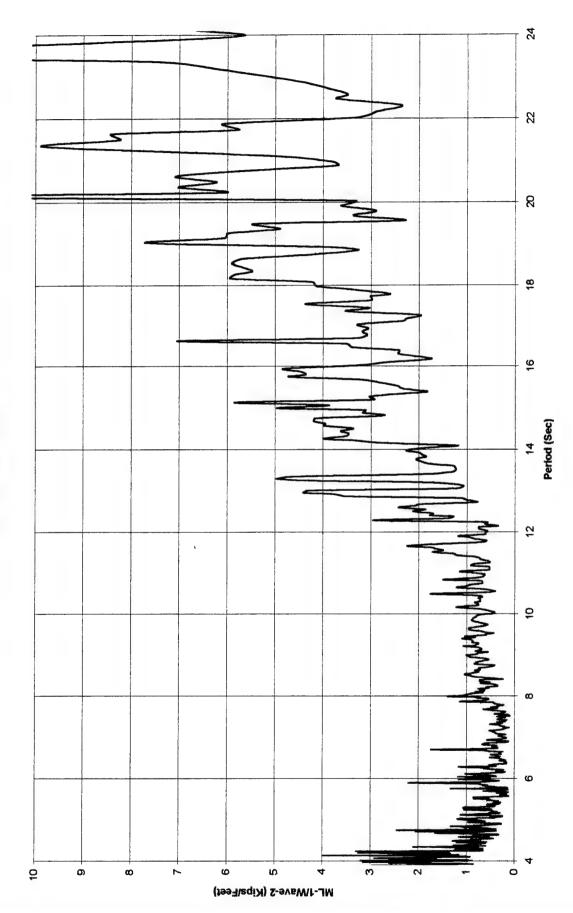
Test 121 - HEAVE RAO



Test 121 - SURGE RAO

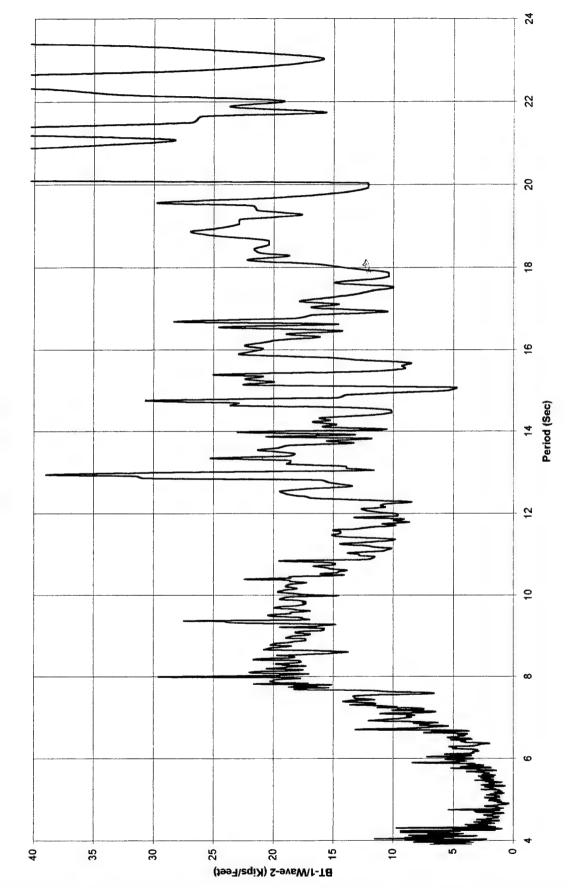


Dane 1

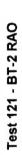


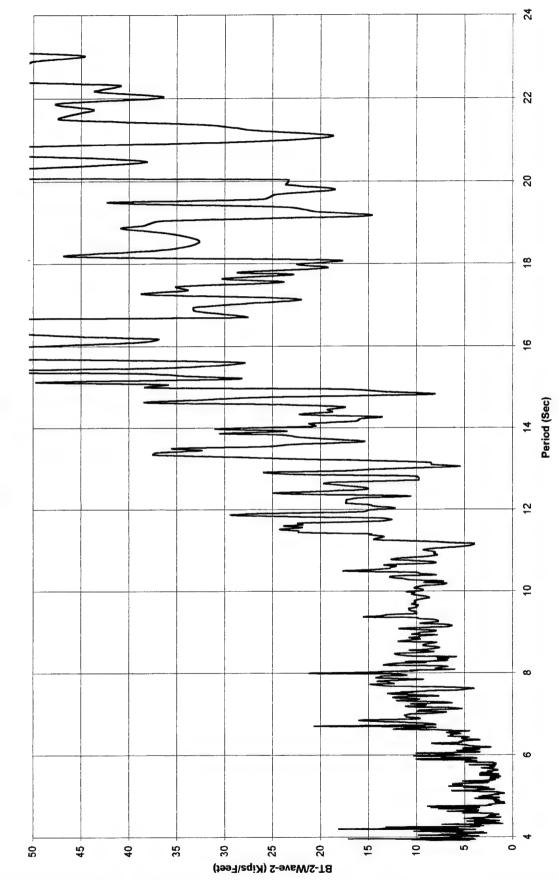
Dane 1

Test 121 - BT-1 RAO



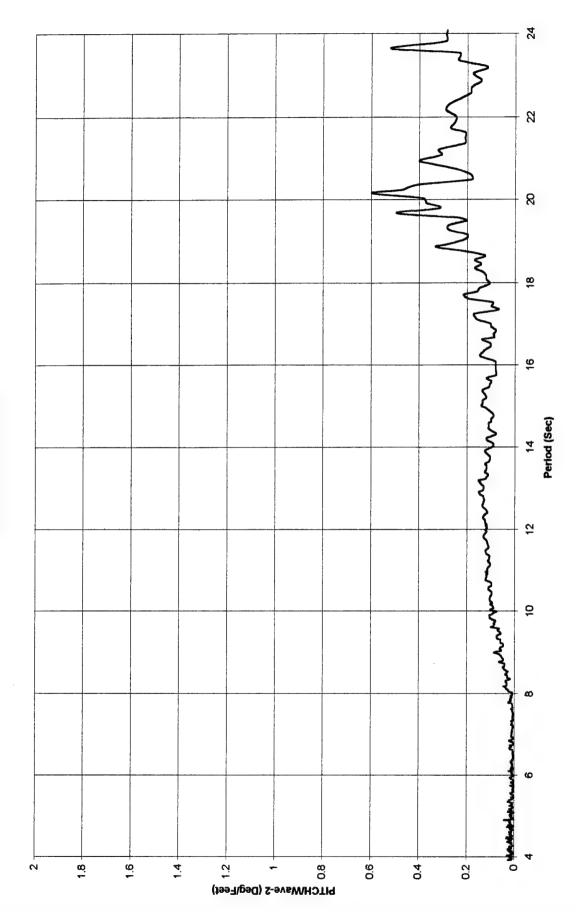
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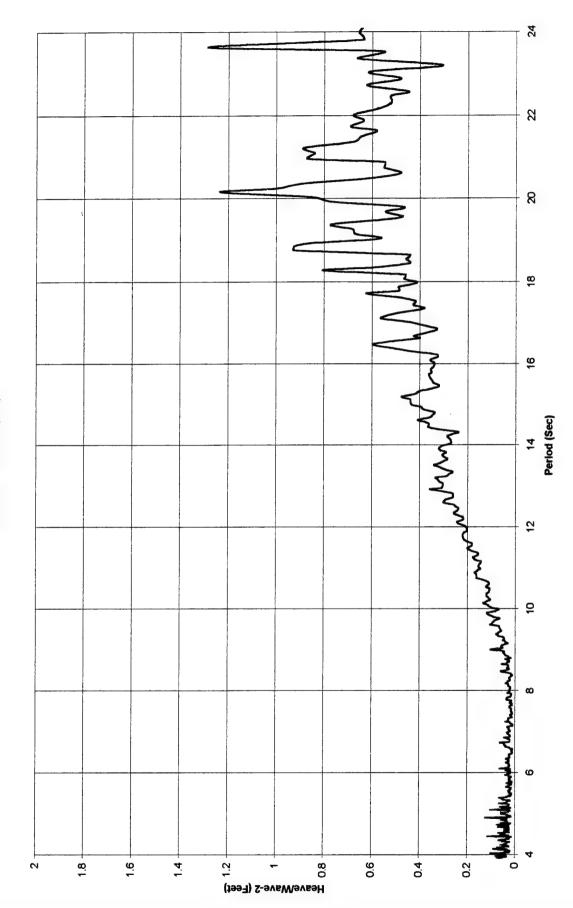
Page 1

Test 122- PITCH RAO

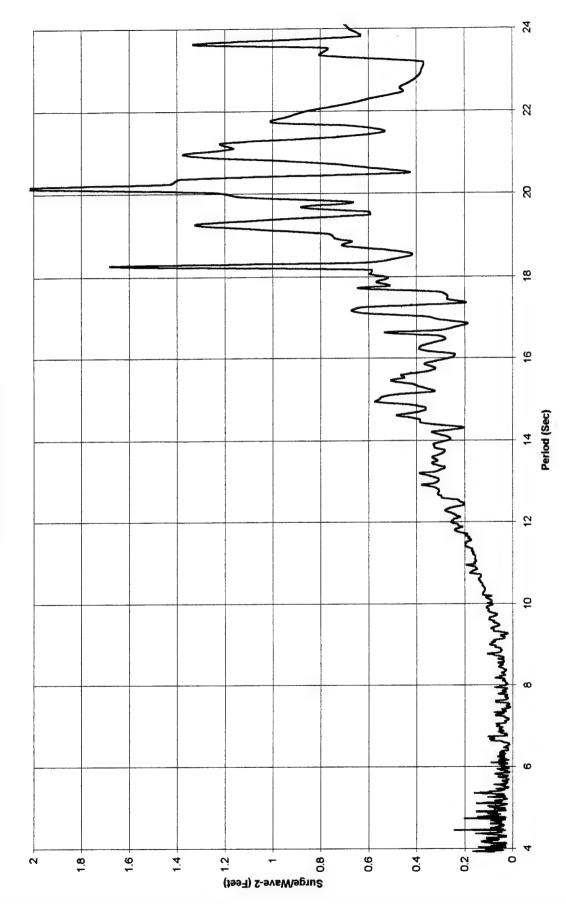


Dage 1

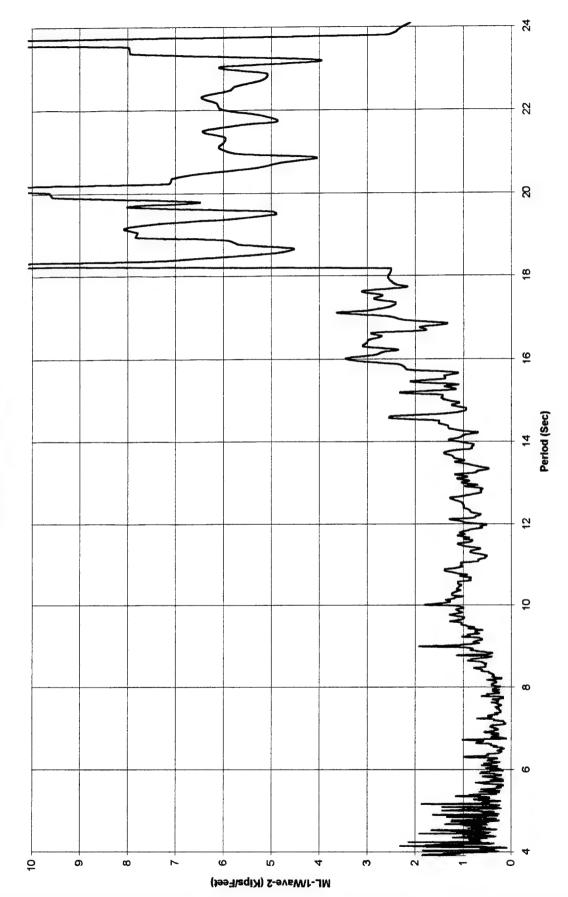
Test 122 - HEAVE RAO





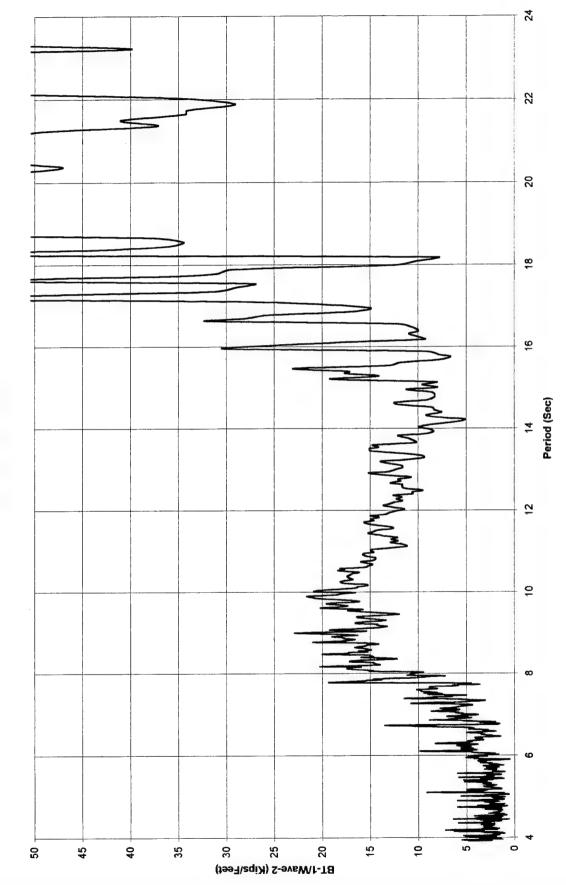




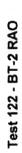


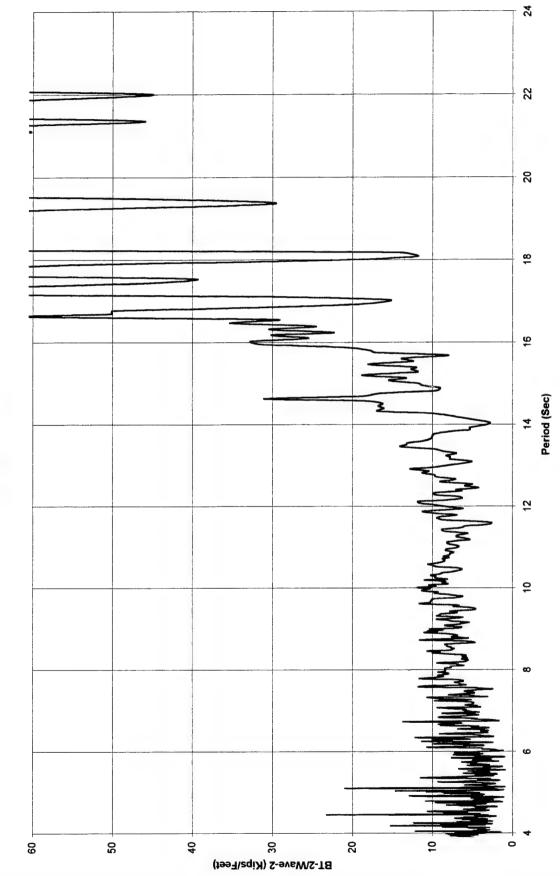
Dane 1

Test 122 - BT-1 RAO

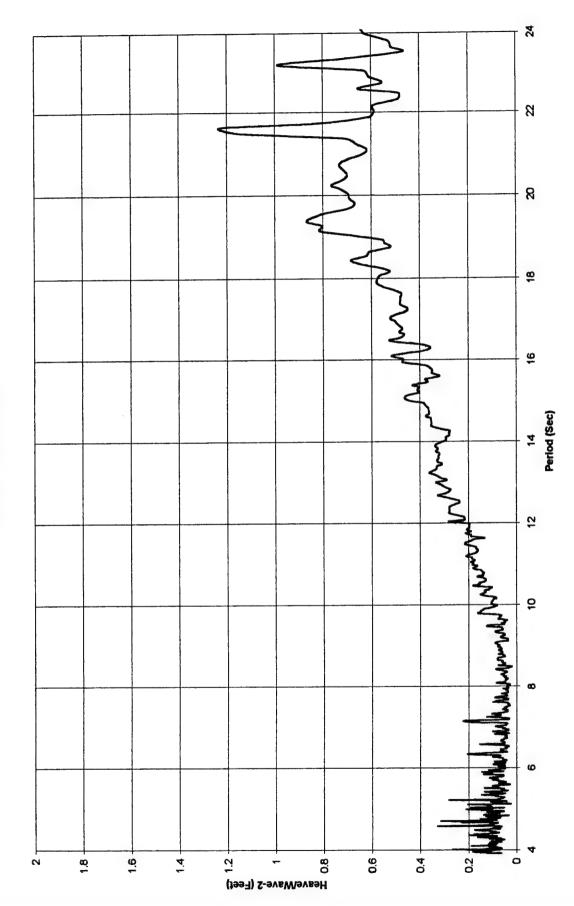


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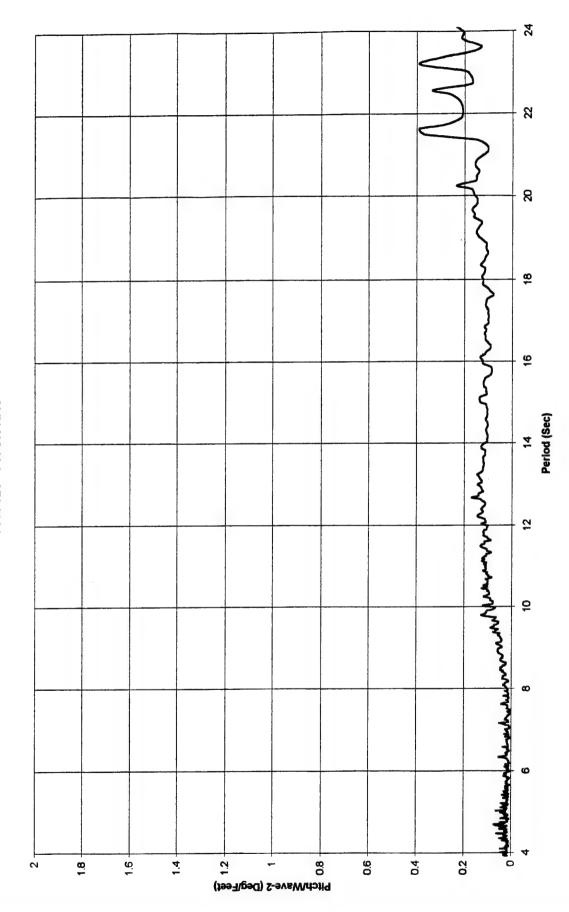




Test 123 - HEAVE RAO

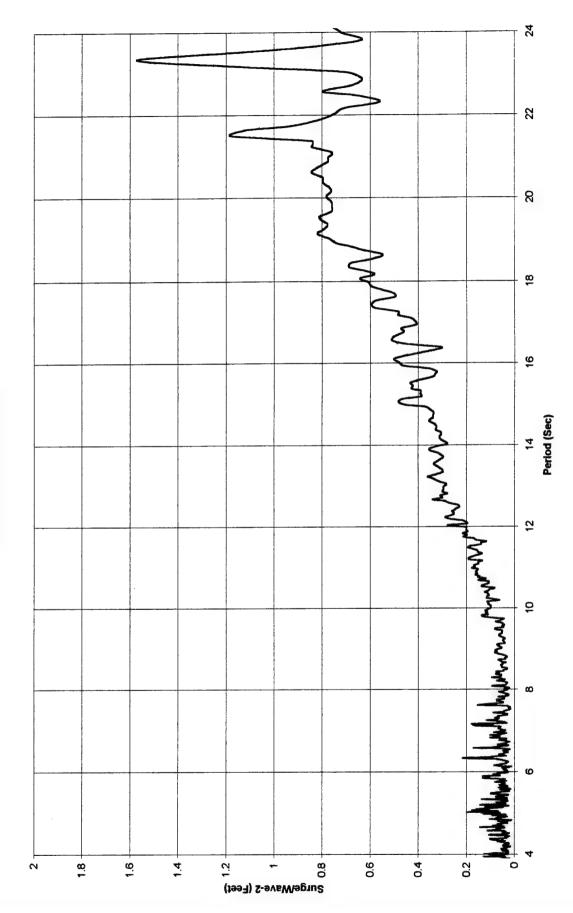


Test 123 - PITCH RAO

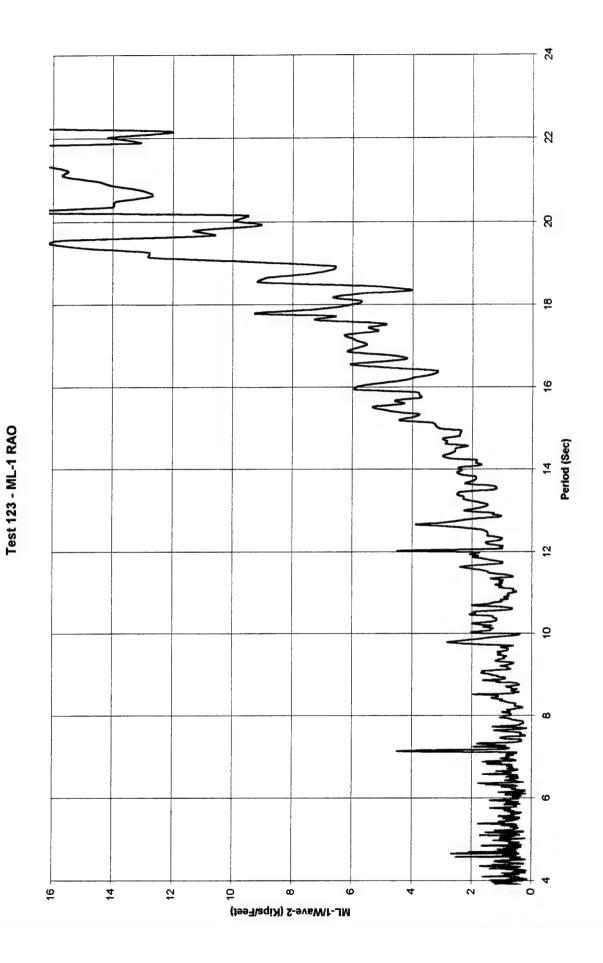


Dane 1

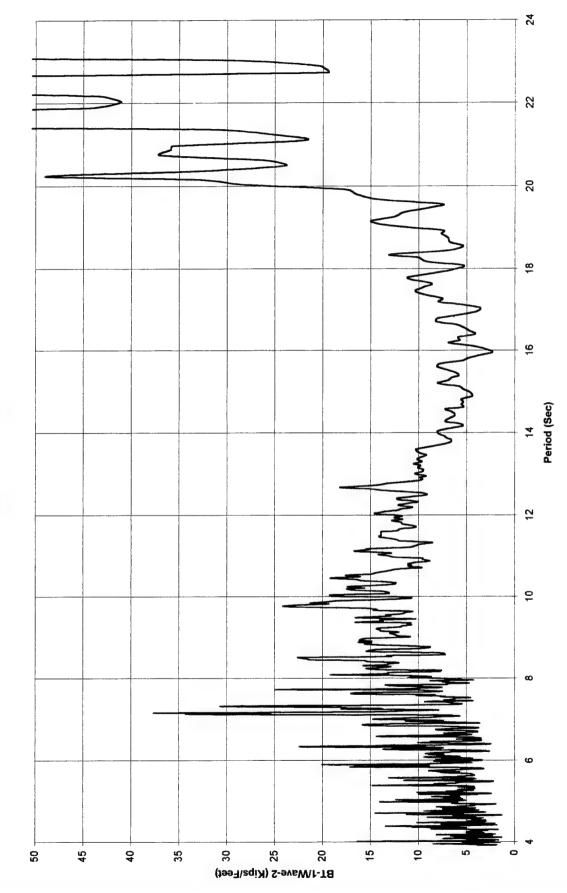
Test 123 - SURGE RAO



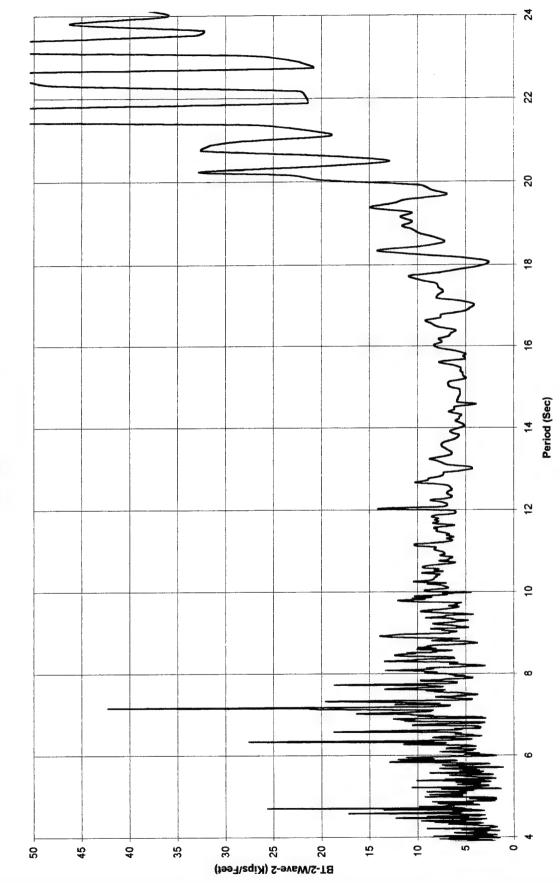




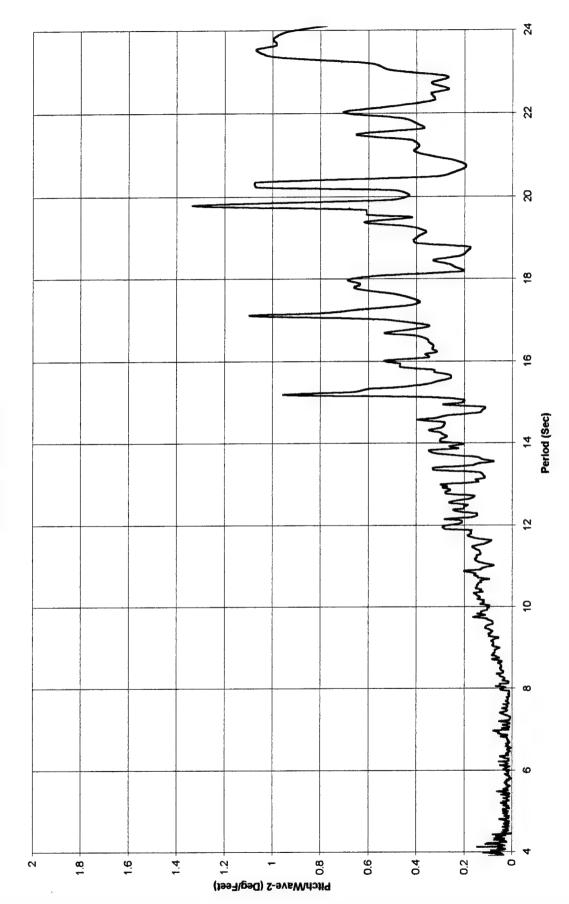
Test 123 - BT-1 RAO



Test 123 - BT-2 RAO

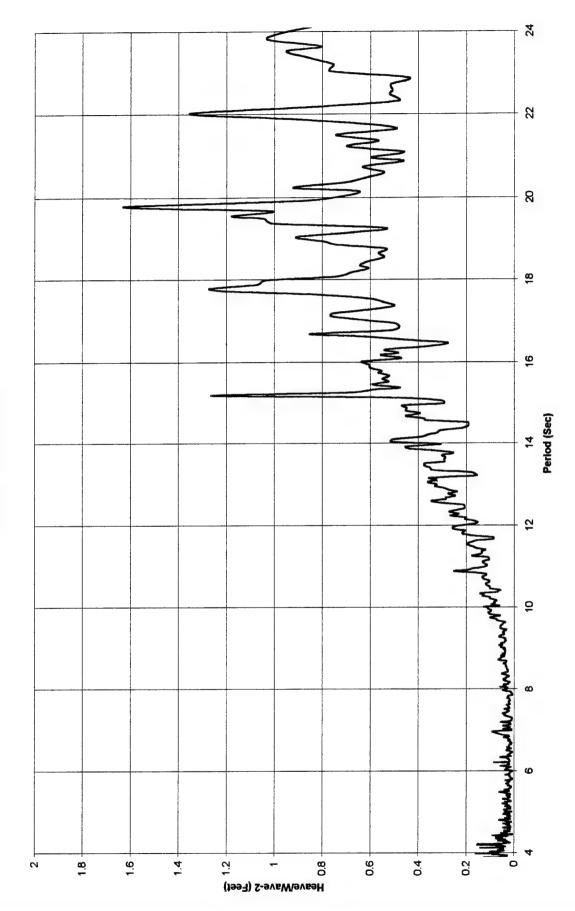




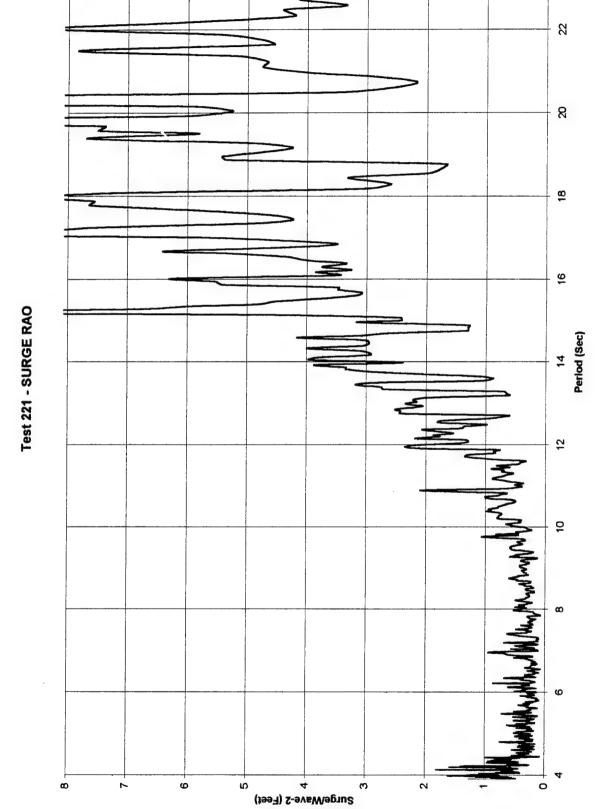


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Test 221 - HEAVE RAO



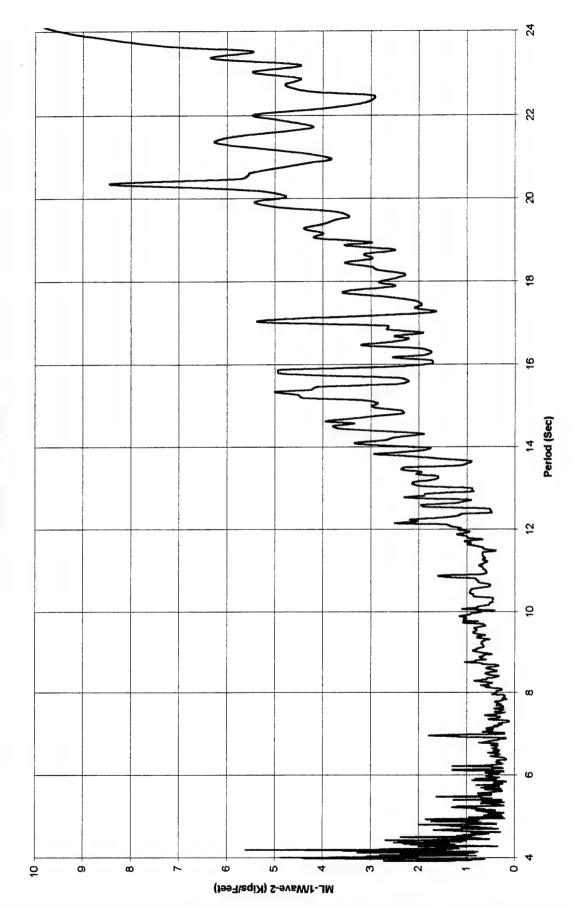
Page 1



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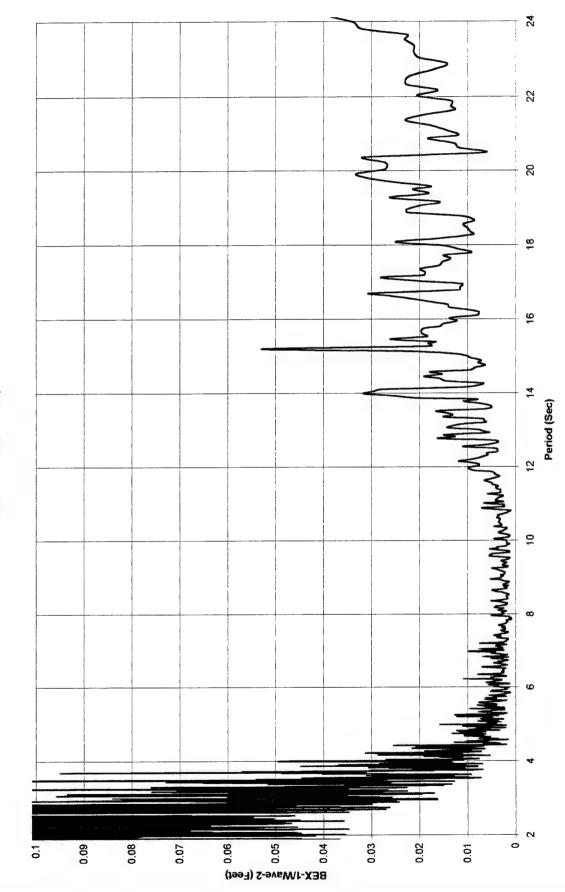
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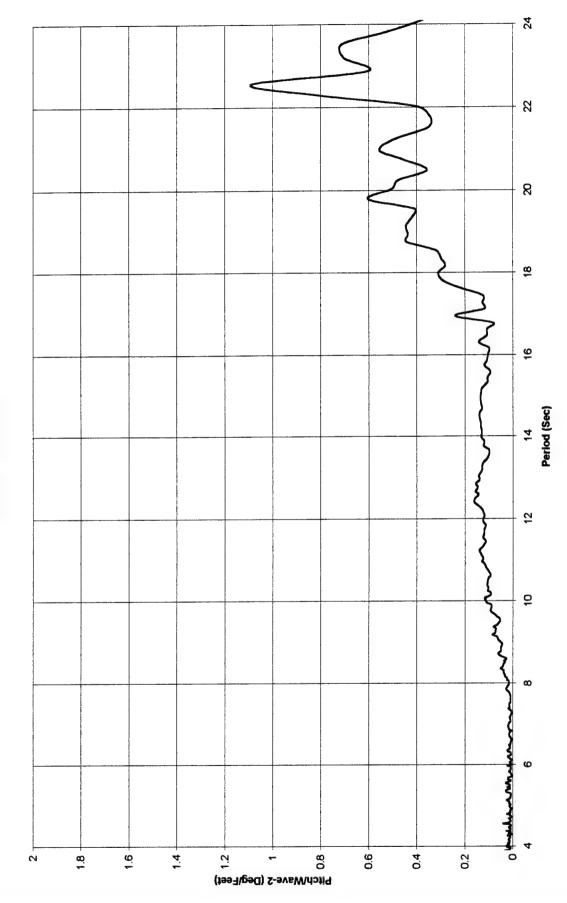
Dane 1

Test 221 - BEX-1 RAO



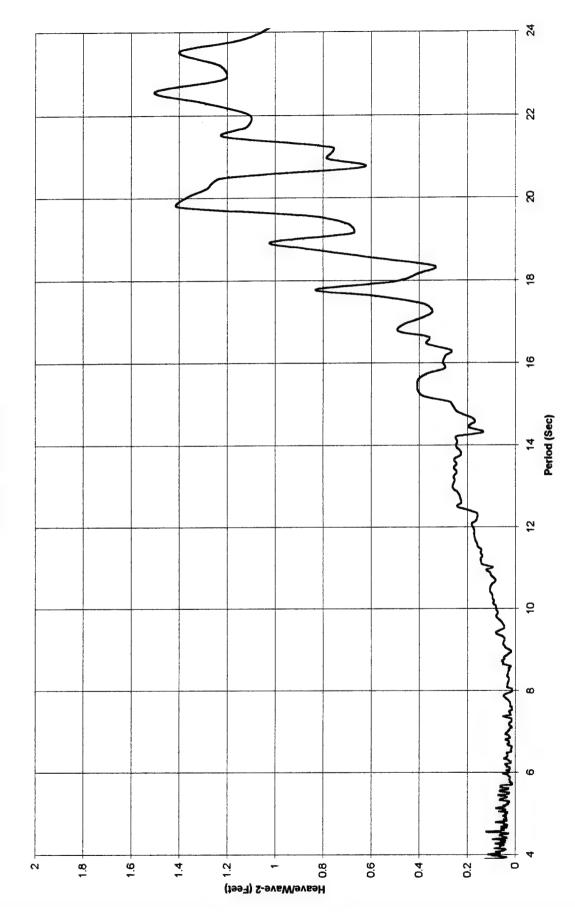
Page 1

Test 222 - PITCH RAO



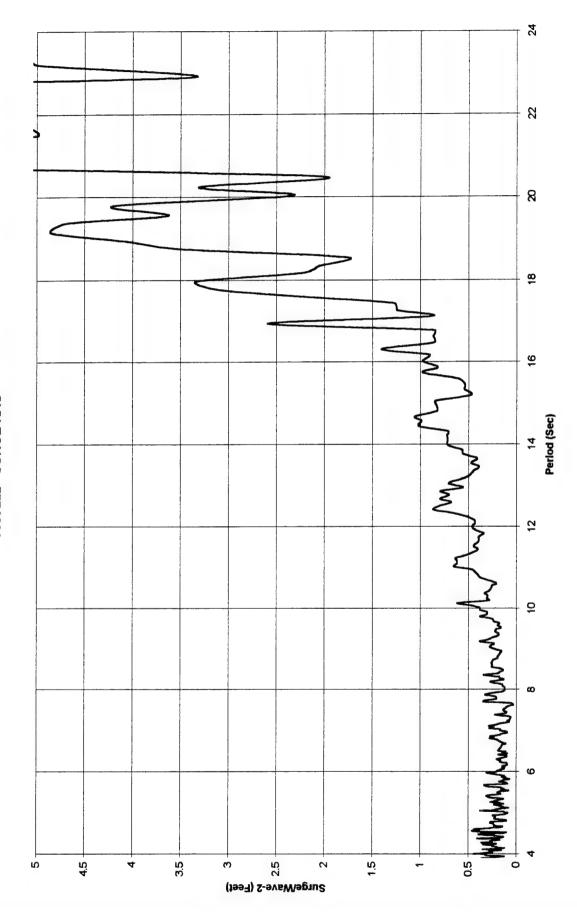
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Test 222 - HEAVE RAO



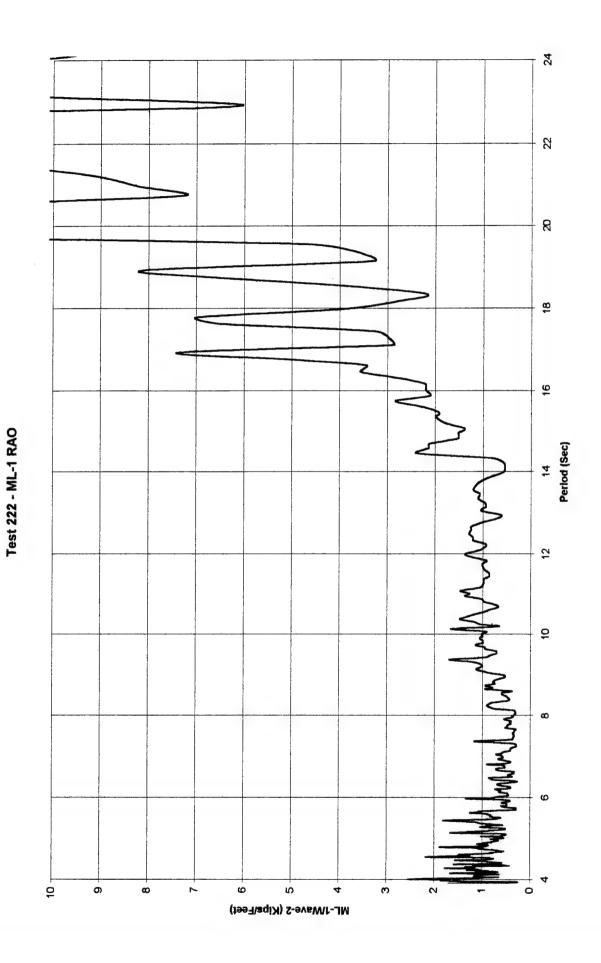
Page 1

Test 222 - SURGE RAO

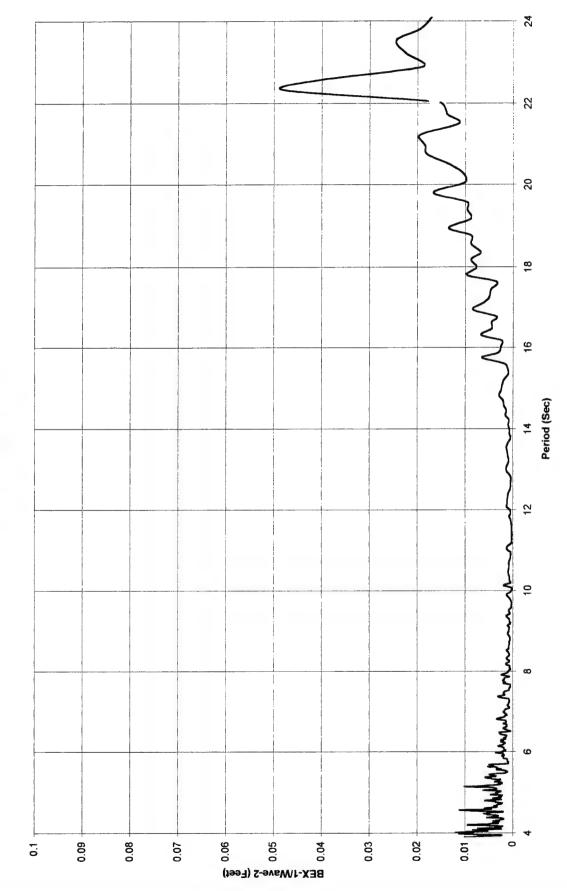


Jane 1

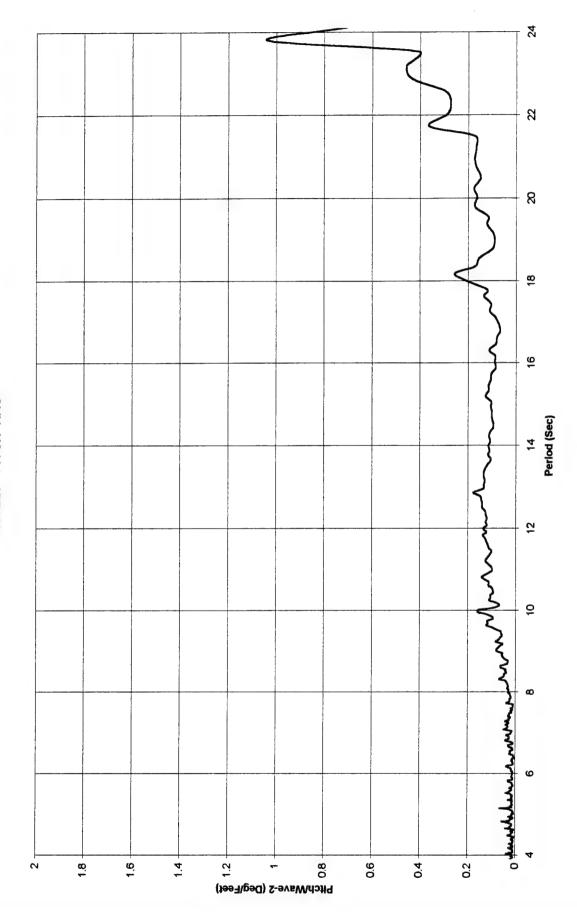




Test 222 - BEX-1 RAO

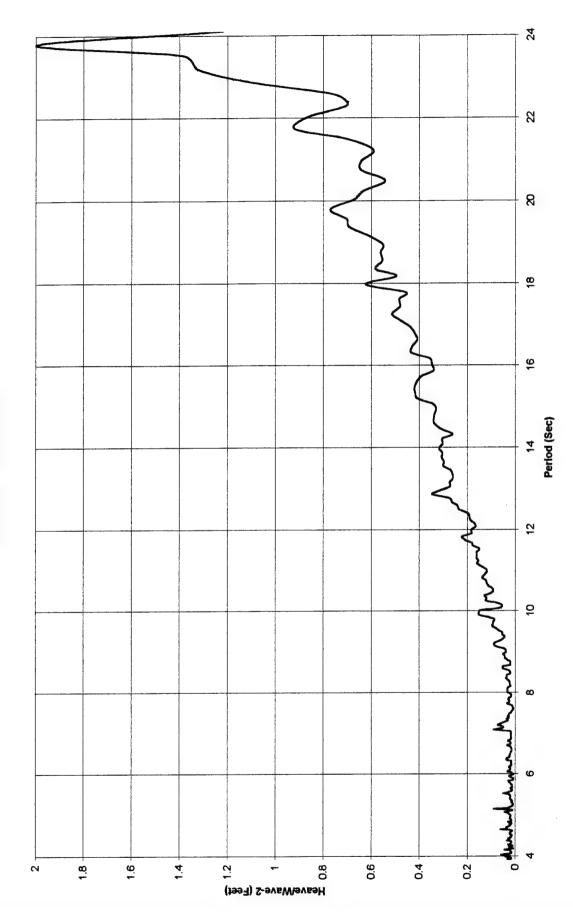


Test 223 - PITCH RAO



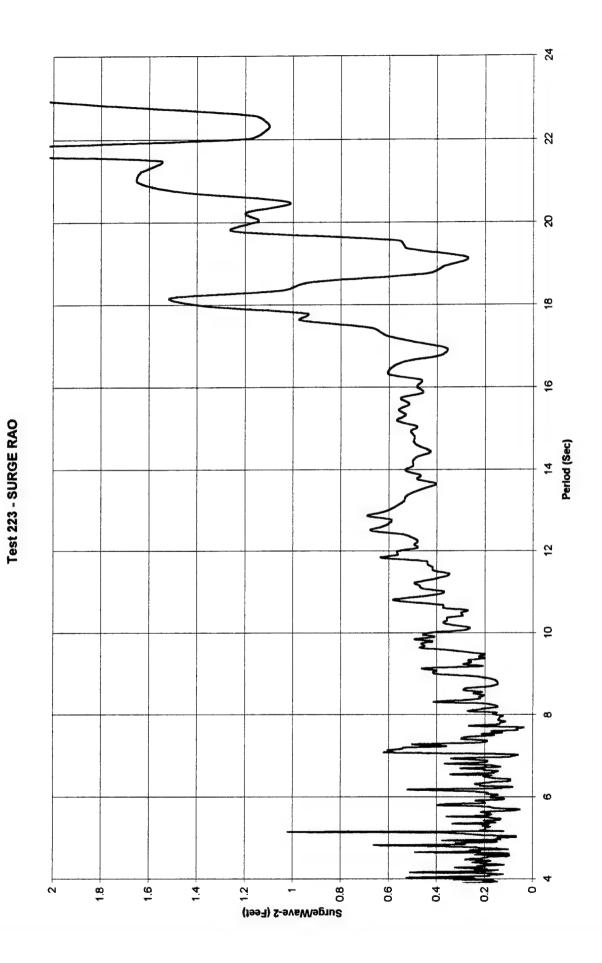
Page 1

Test 223 - HEAVE RAO

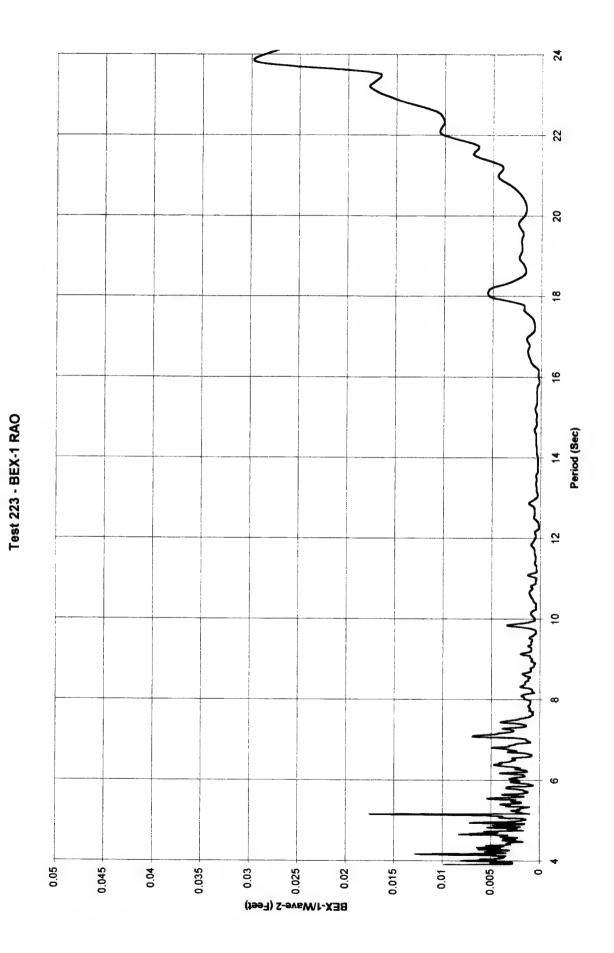


Dane 1

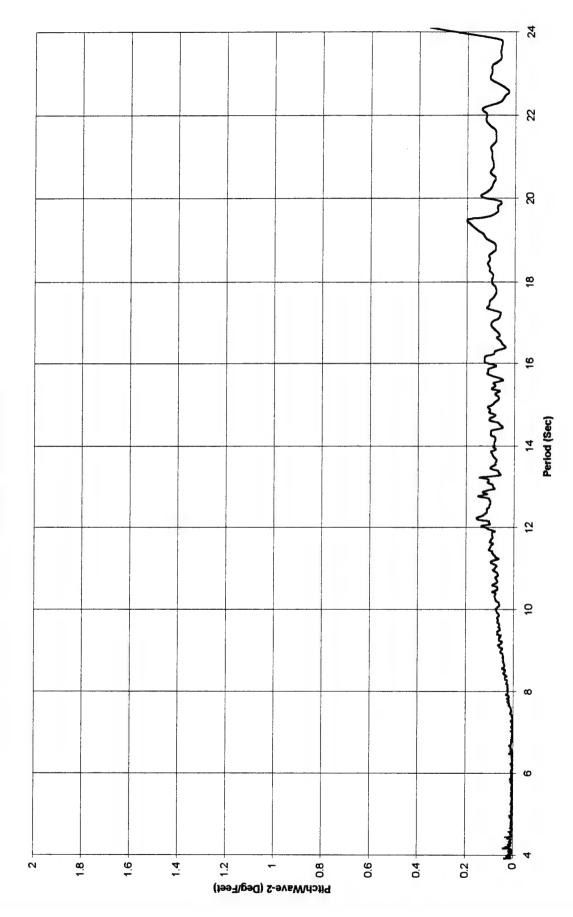




Page 1

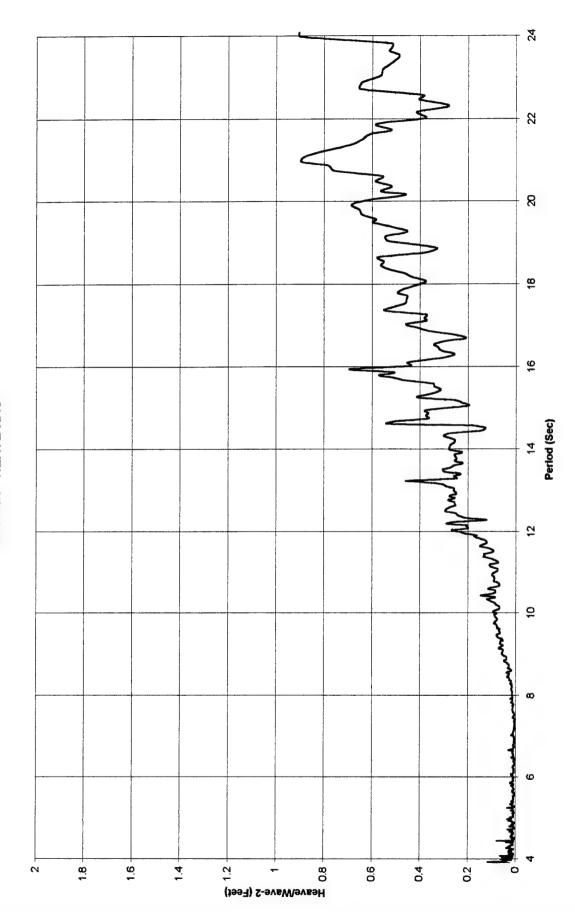


Test 321 - PITCH RAO



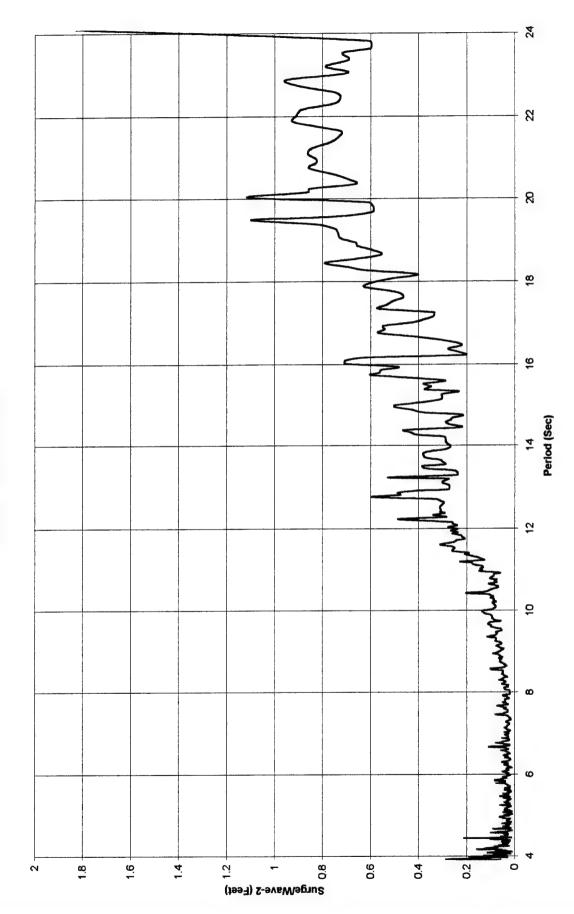
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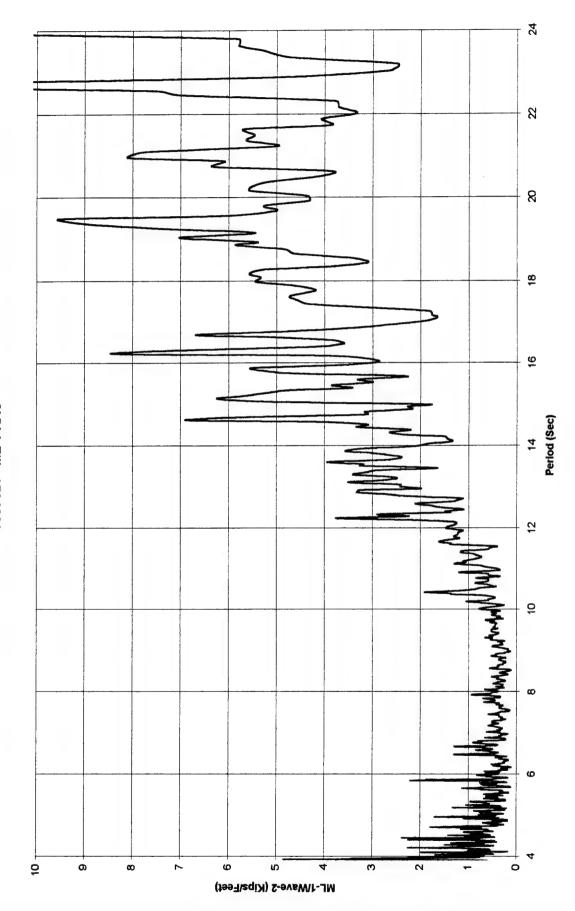
Test 321 - HEAVE RAO



Dane 1

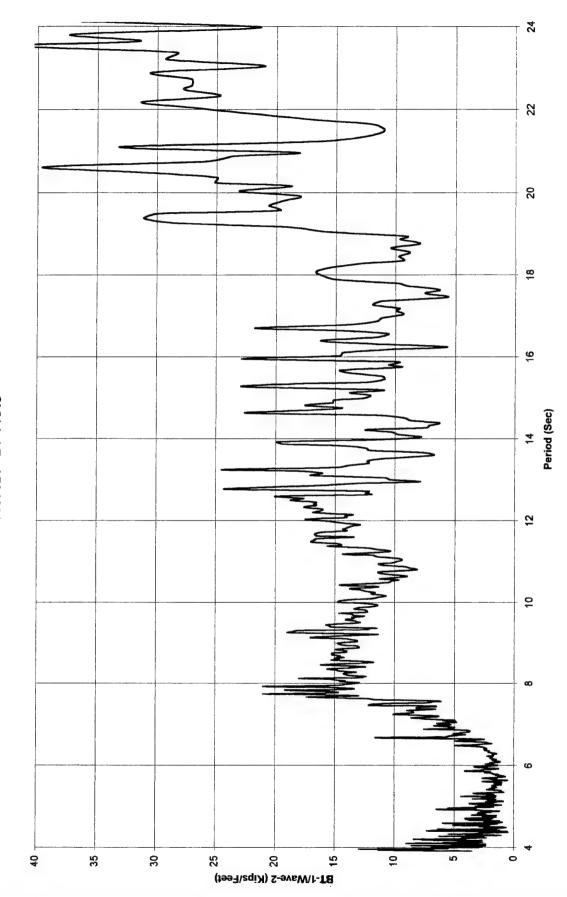
Test 321 - SURGE RAO





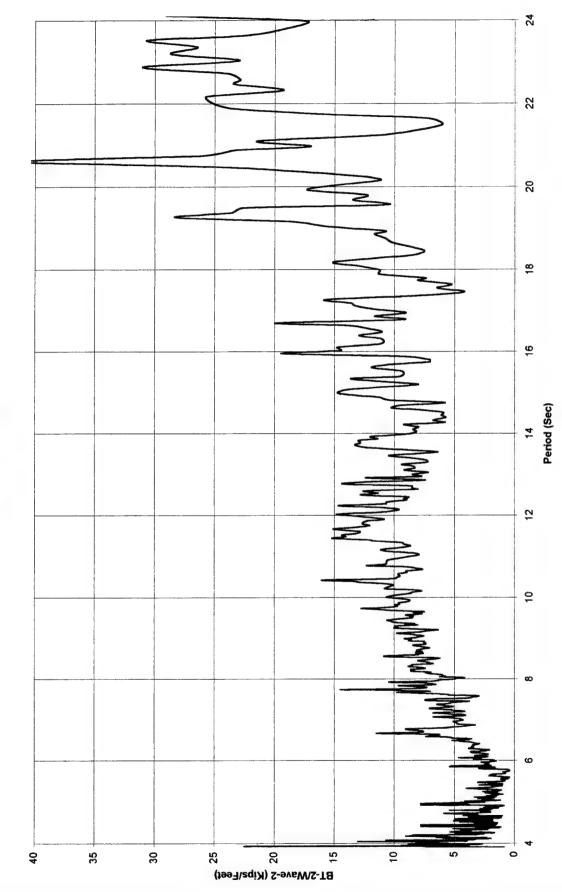
Dane 1

Test 321 - BT-1 RAO



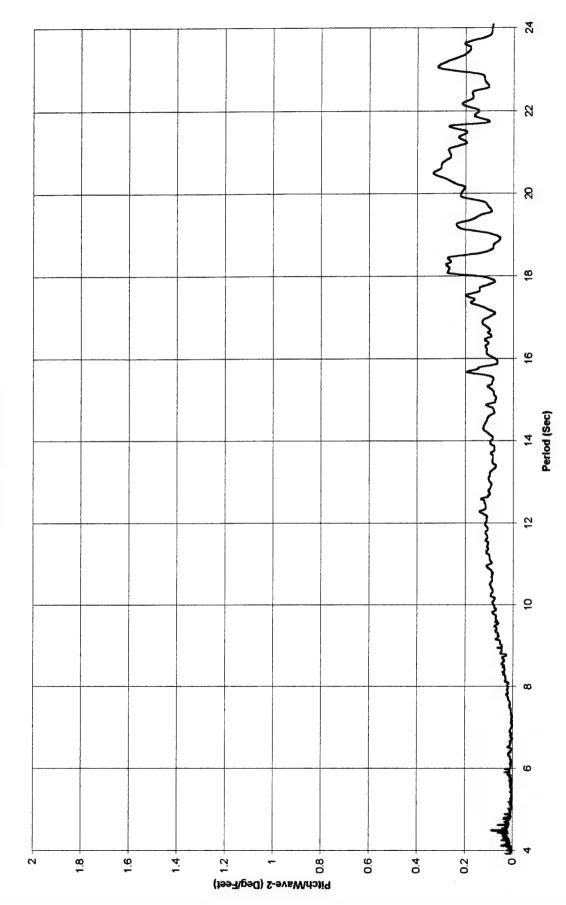
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Test 321 - BT-2 RAO

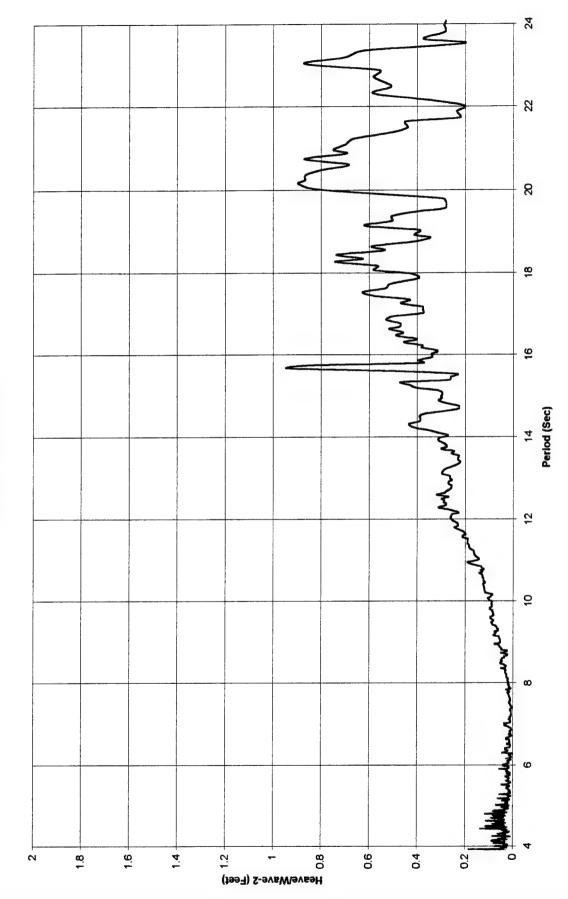


Dane 1



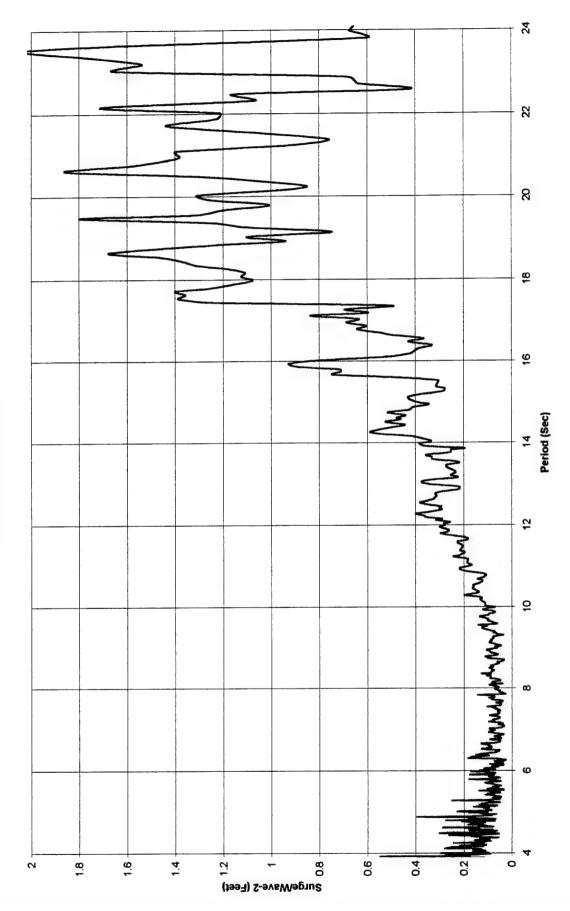


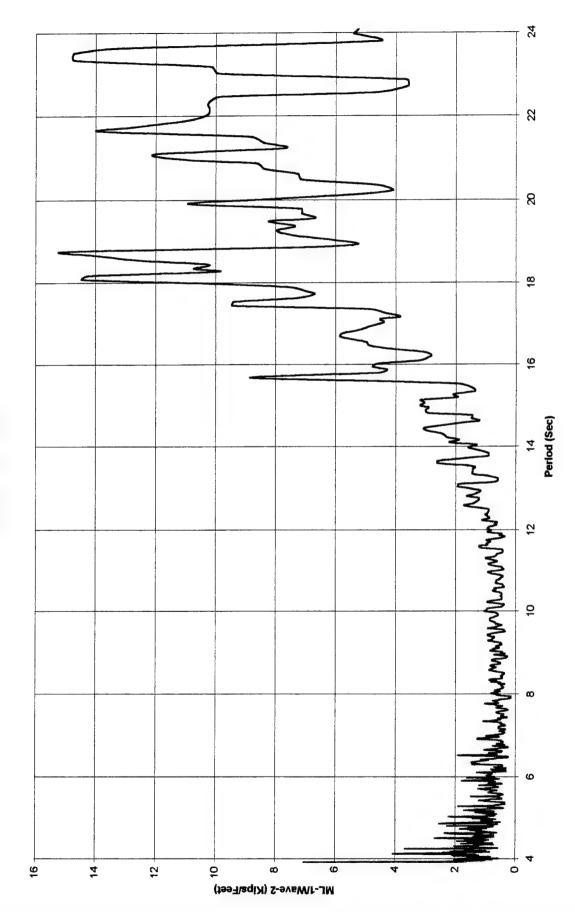
Test 322 - HEAVE RAO



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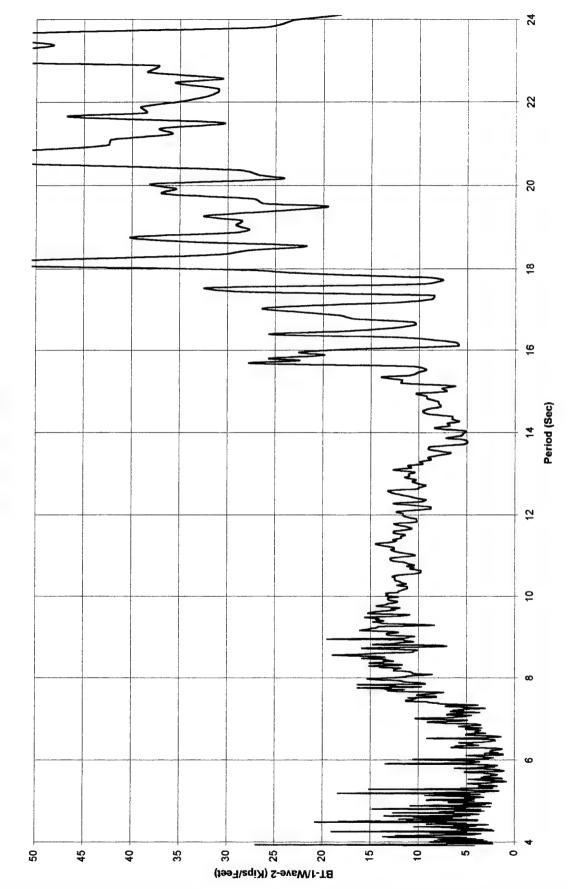






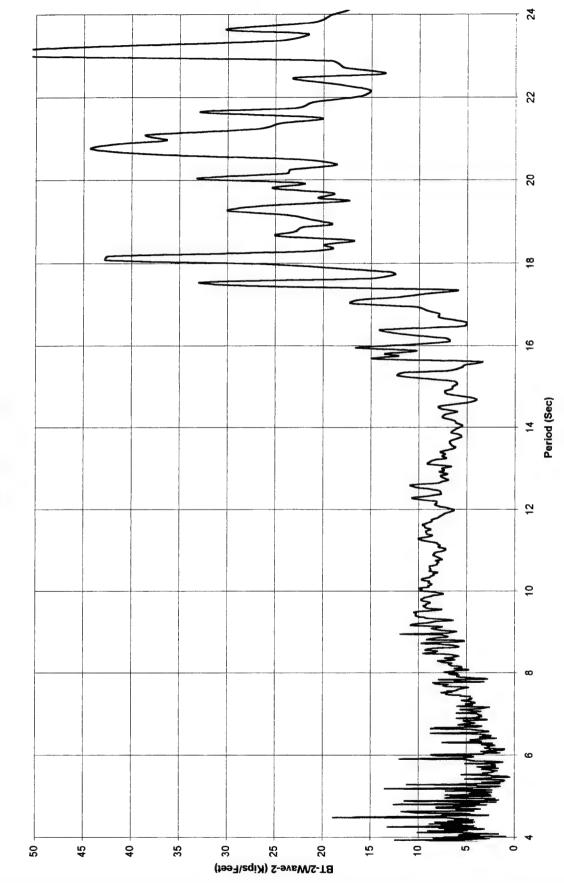
Page 1

Test 322 - BT-1 RAO



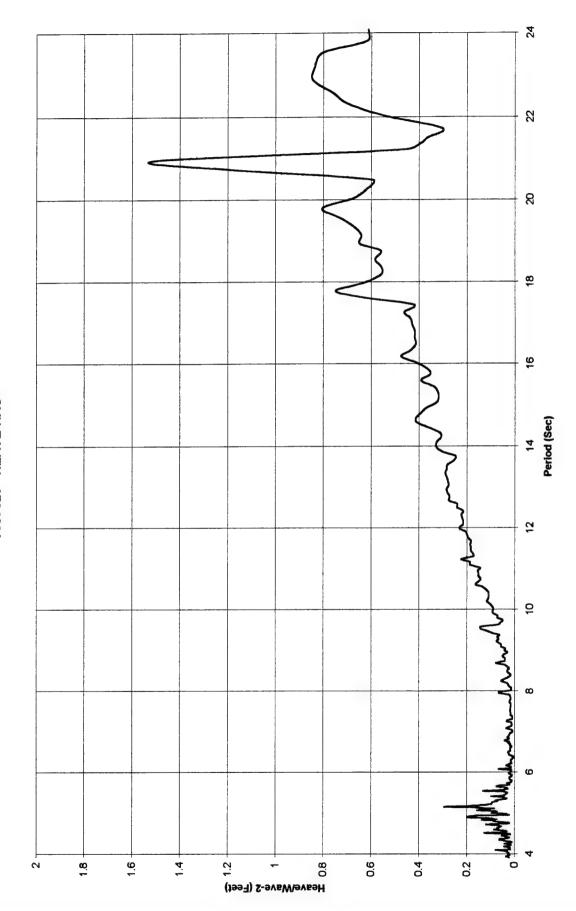
Dane 1

Test 322 - BT-2 RAO



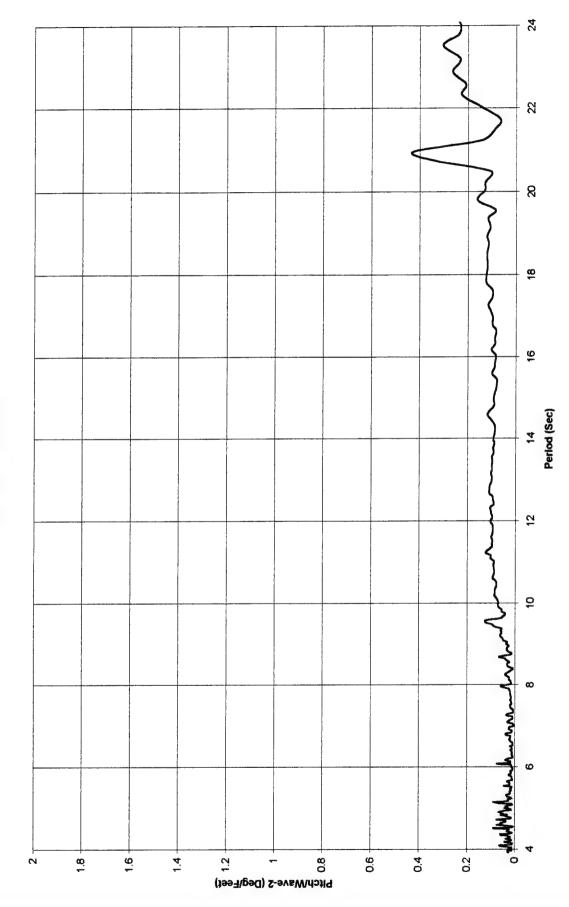
Jane 1

Test 323 - HEAVE RAO

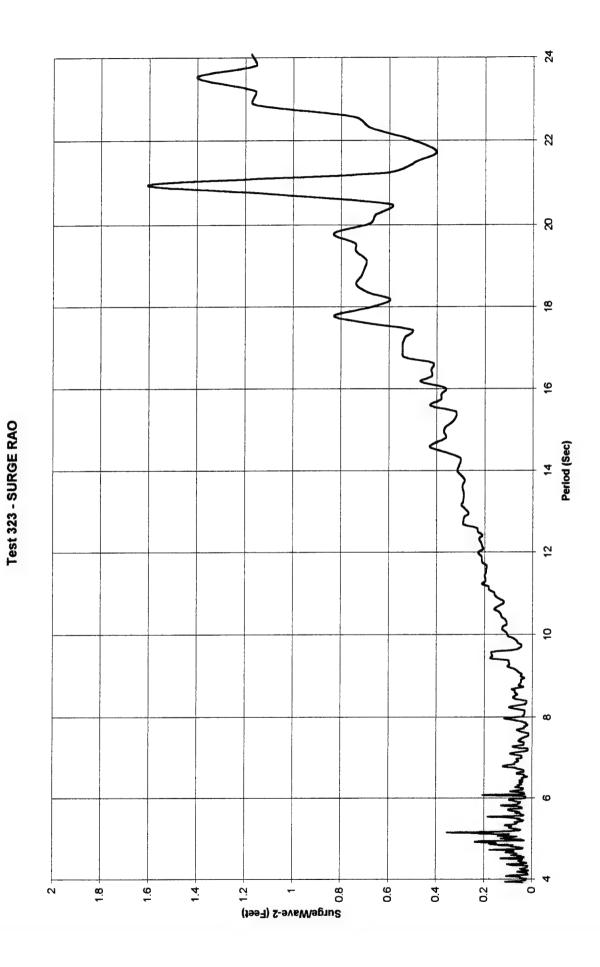


Dage 1

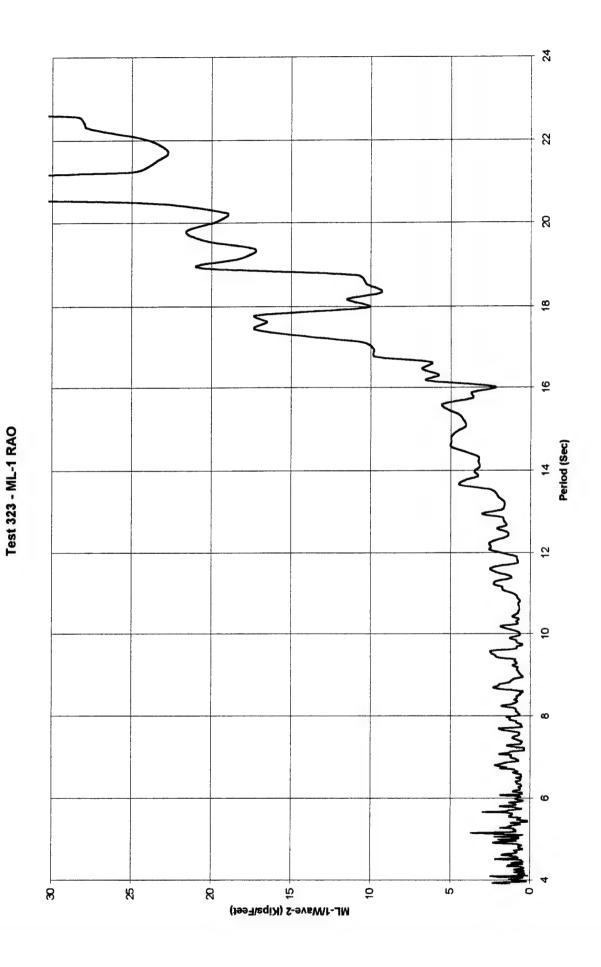
Test 323 - PITCH RAO



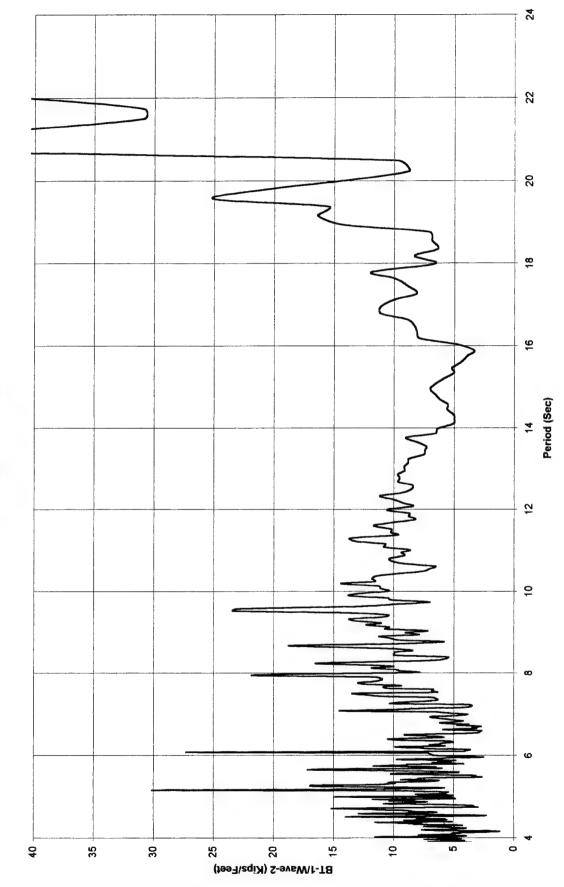






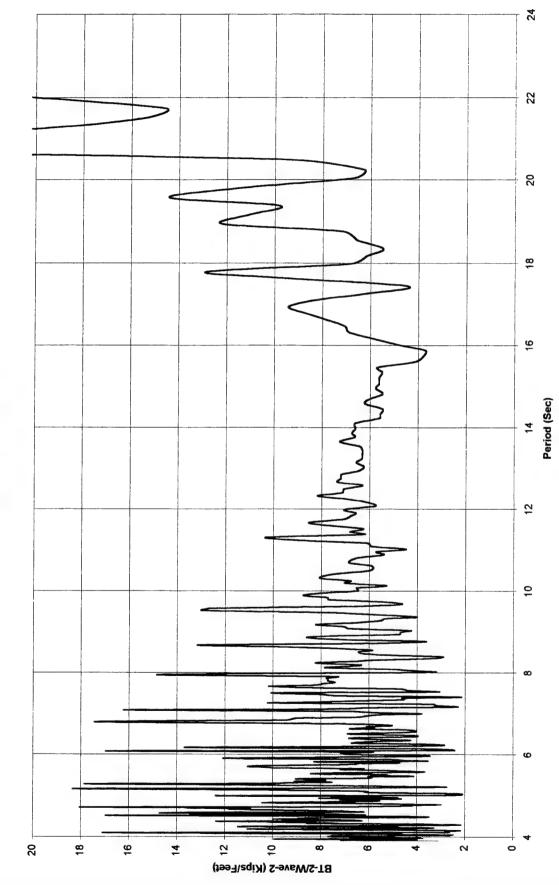


Test 323 - BT-1 RAO



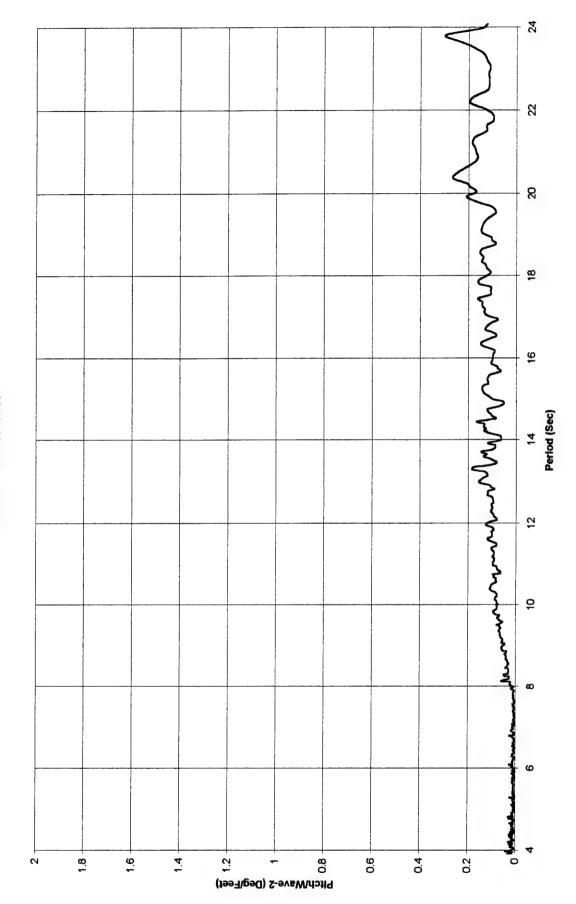
Page 1

Test 323 - BT-2 RAO



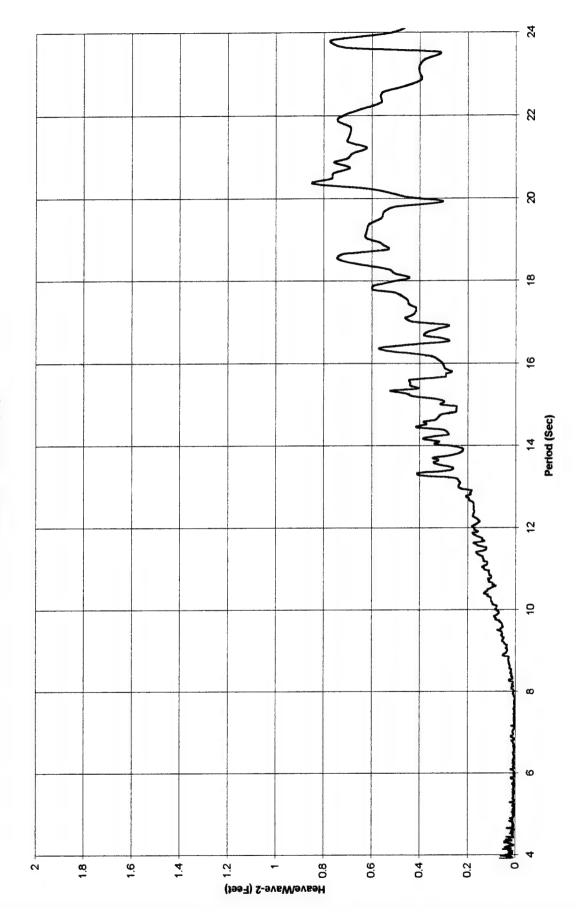
Jane 1

Test 361 - PITCH RAO



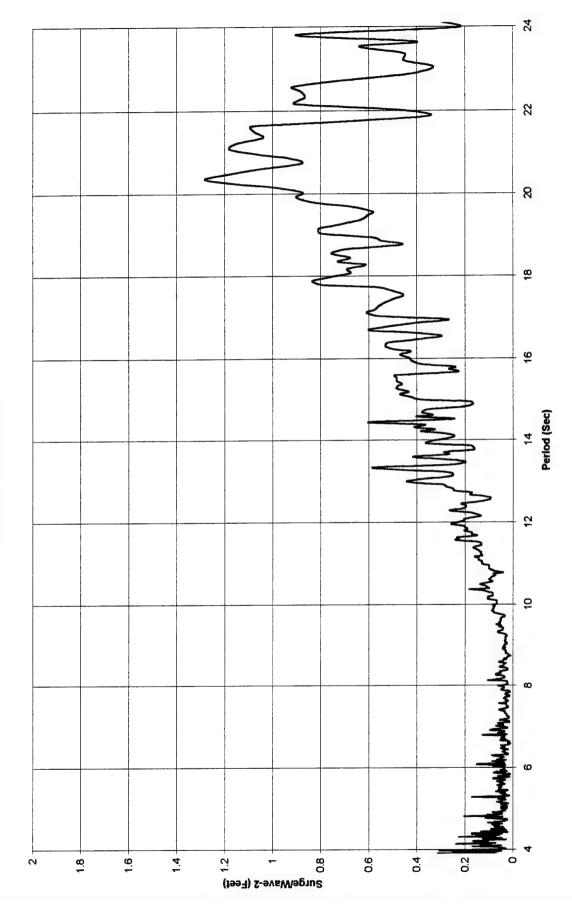
Page 1

Test 361 - HEAVE RAO

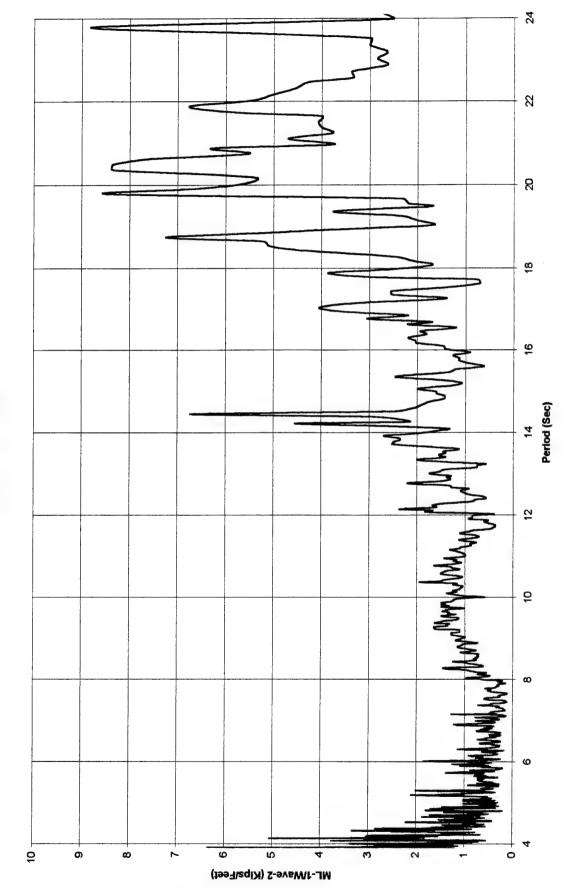


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Test 361 - SURGE RAO

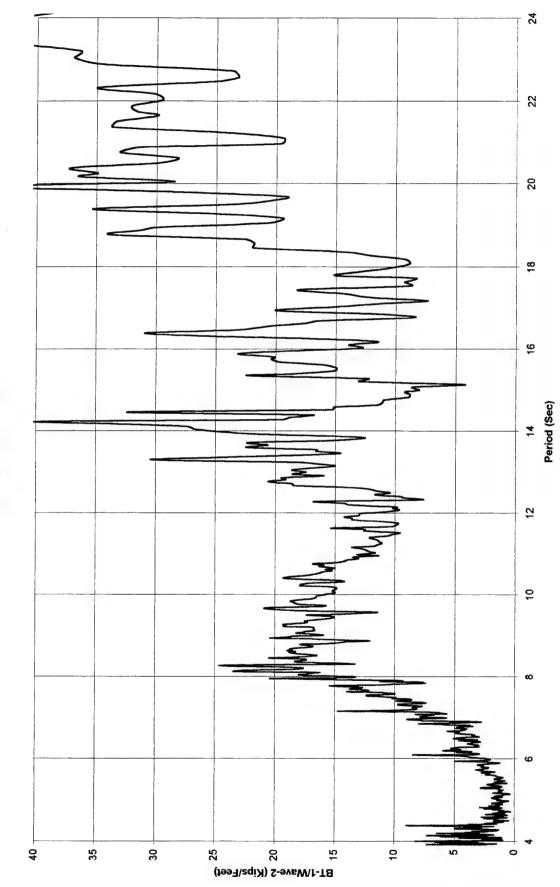




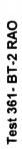


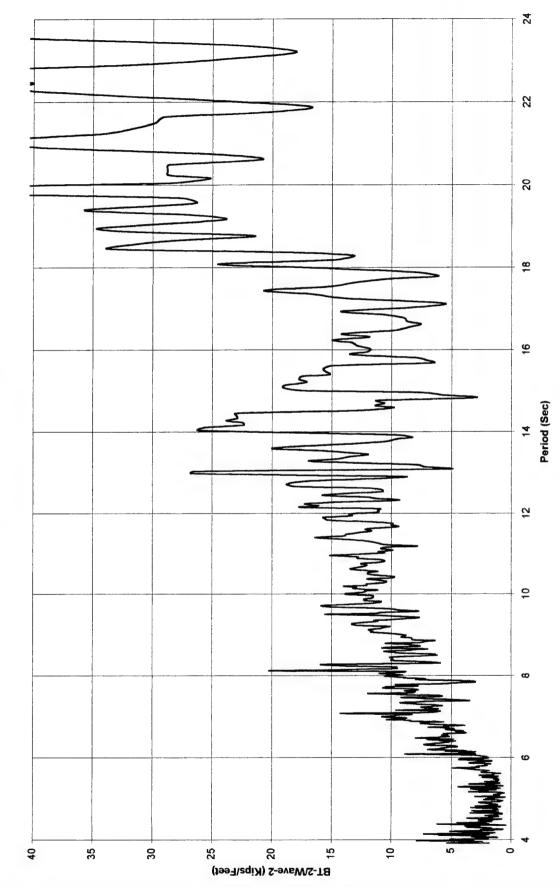
Page 1

Test 361 - BT-1 RAO

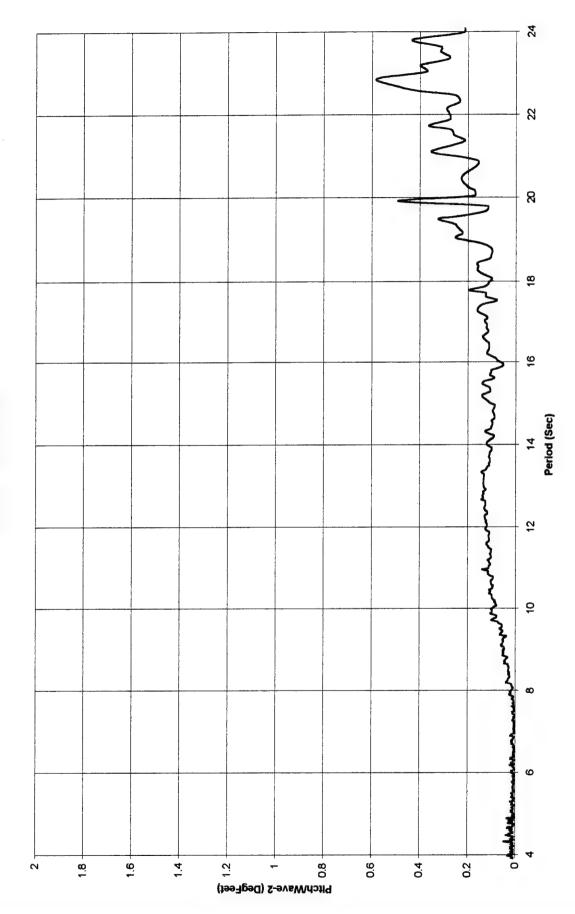


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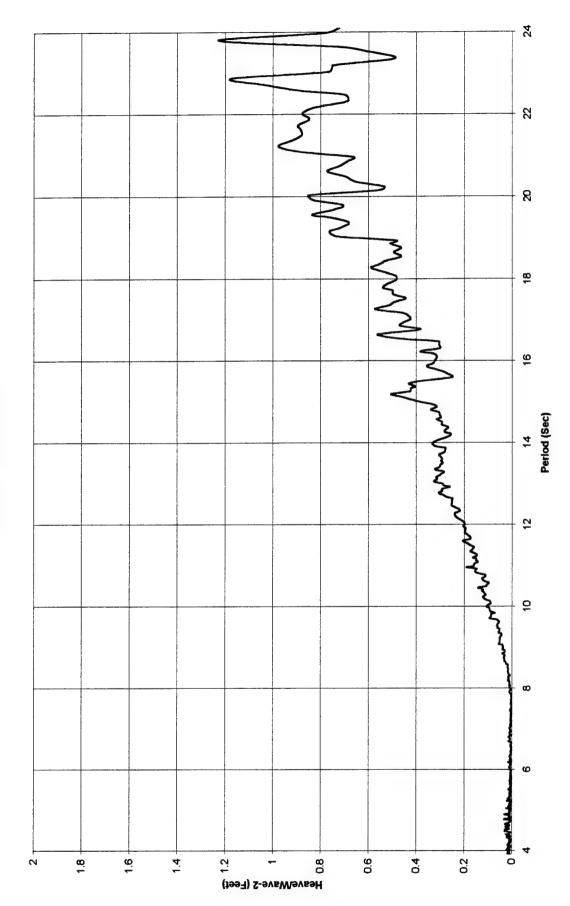


Test 362 - PITCH RAO



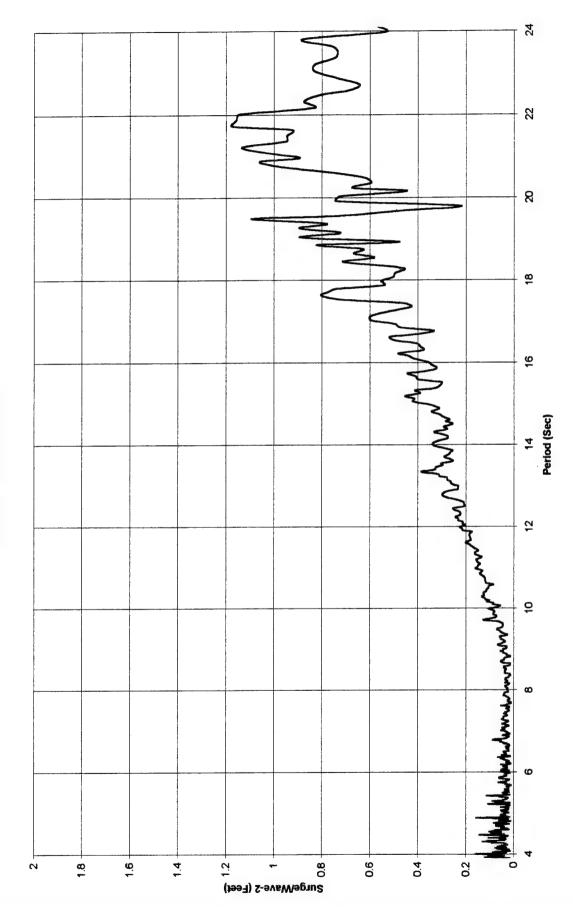
Jane 1

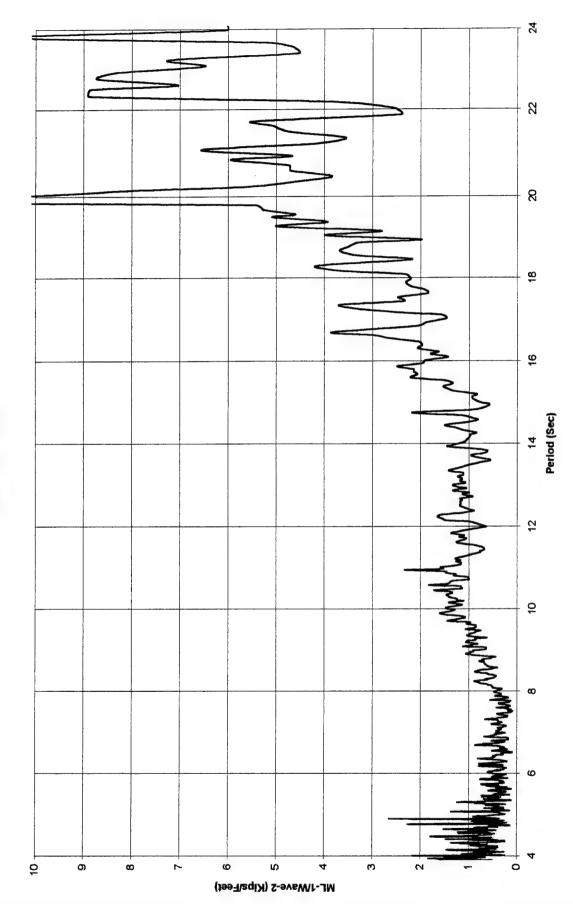
Test 362 - HEAVE RAO



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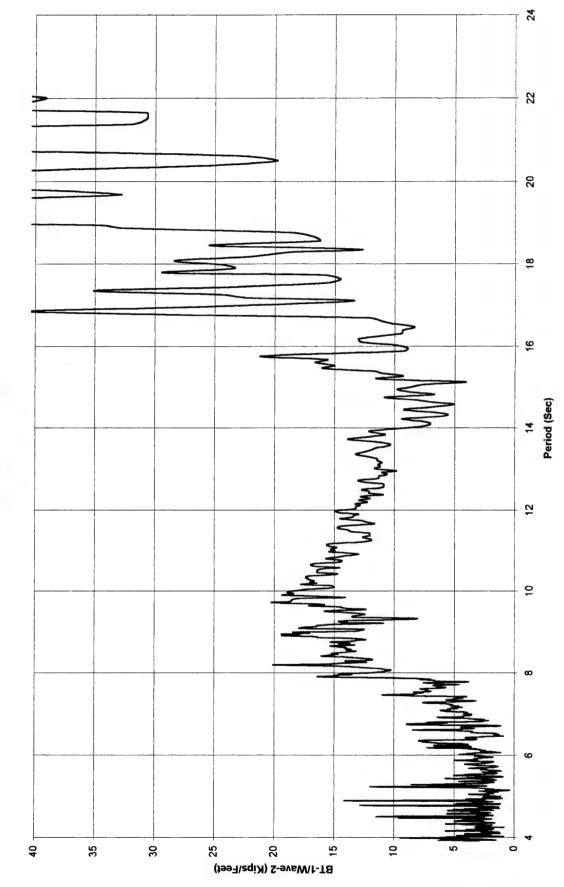
Test 362 - SURGE RAO



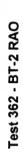


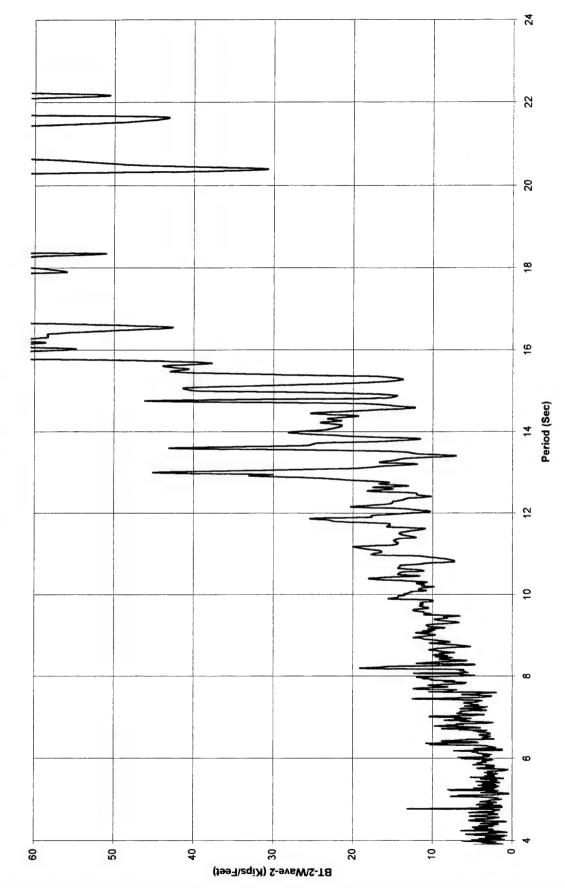
Page 1

Test 362 - BT-1 RAO



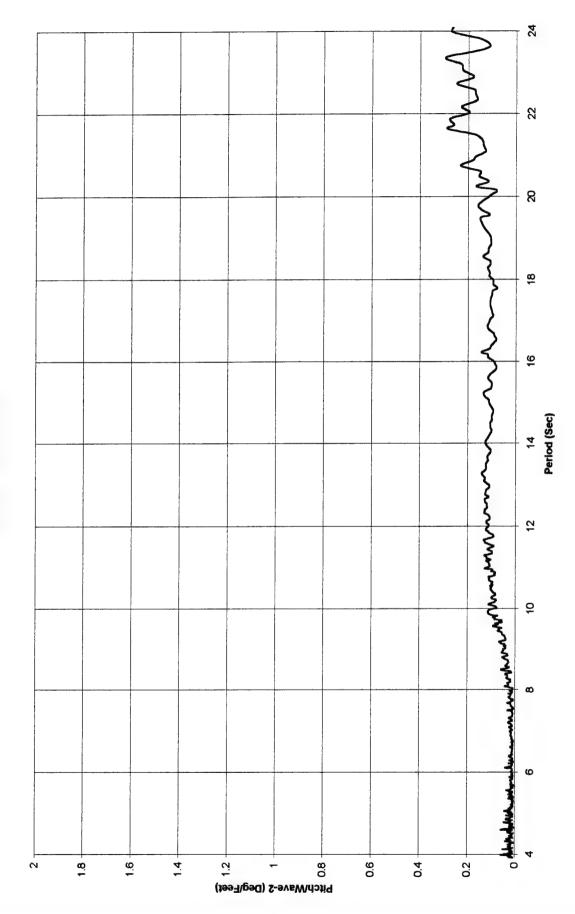
Page 1





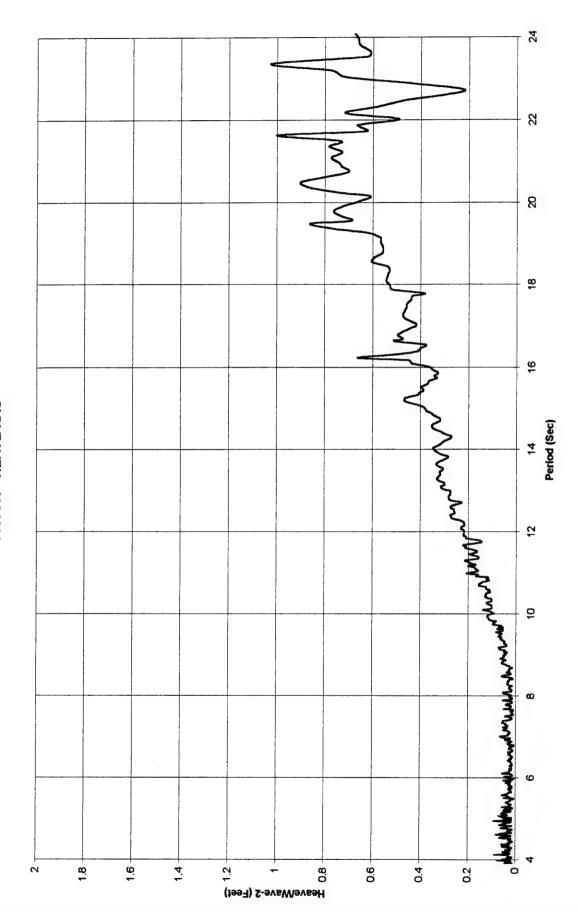
Jace 1

Test 363 - PITCH RAO



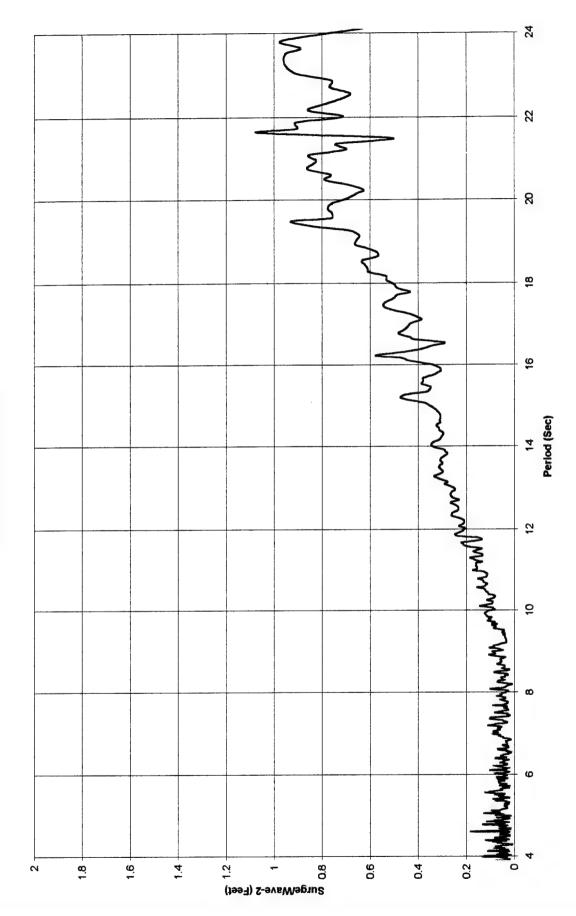
Dane 1

Test 363 - HEAVE RAO



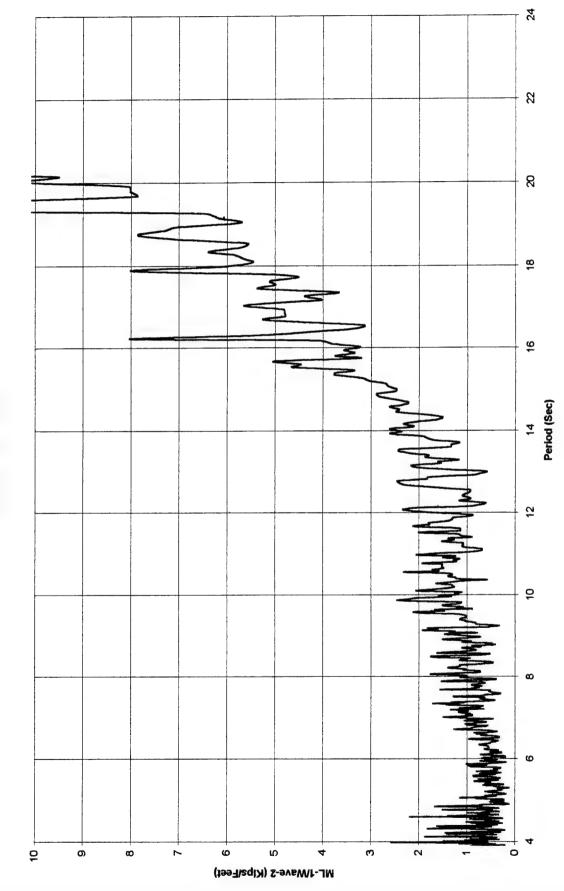
Page 1

Test 363 - SURGE RAO



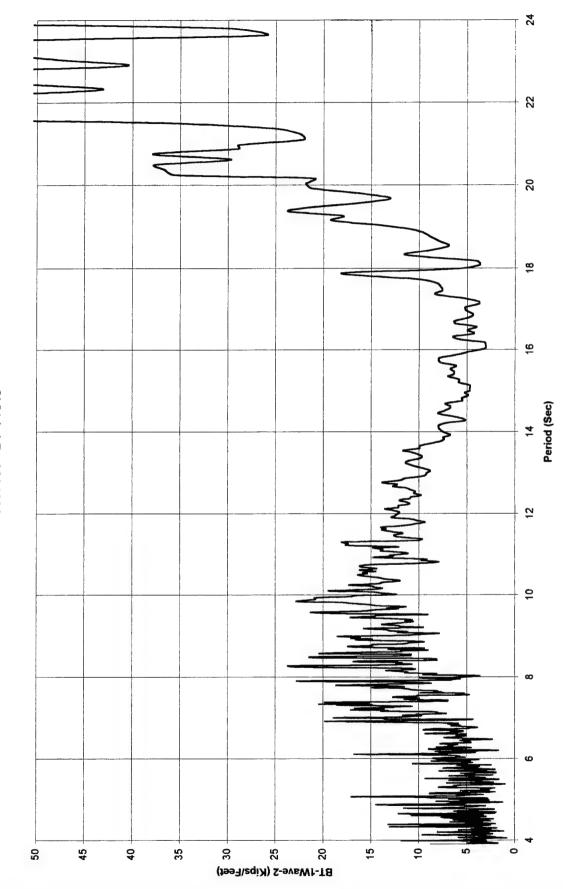
Page 1



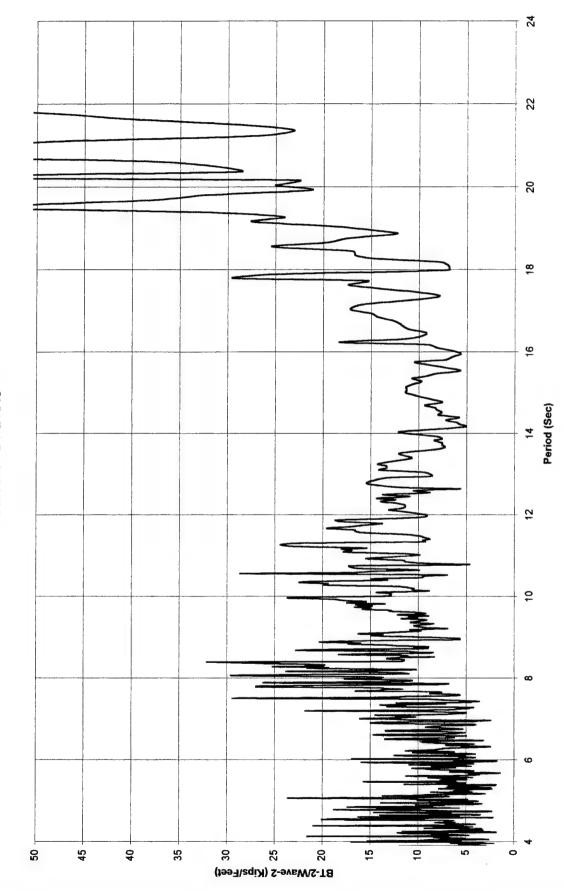


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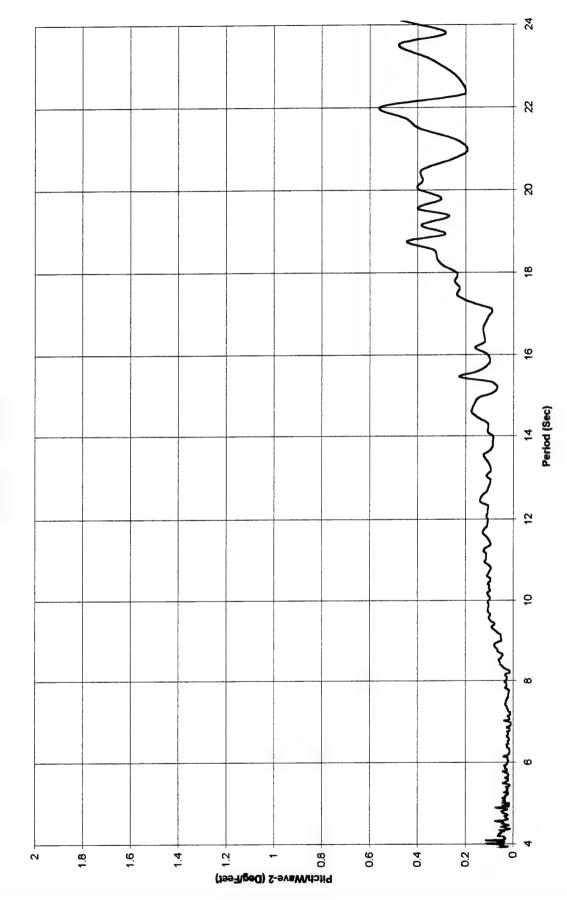
Test 363 - BT-1 RAO



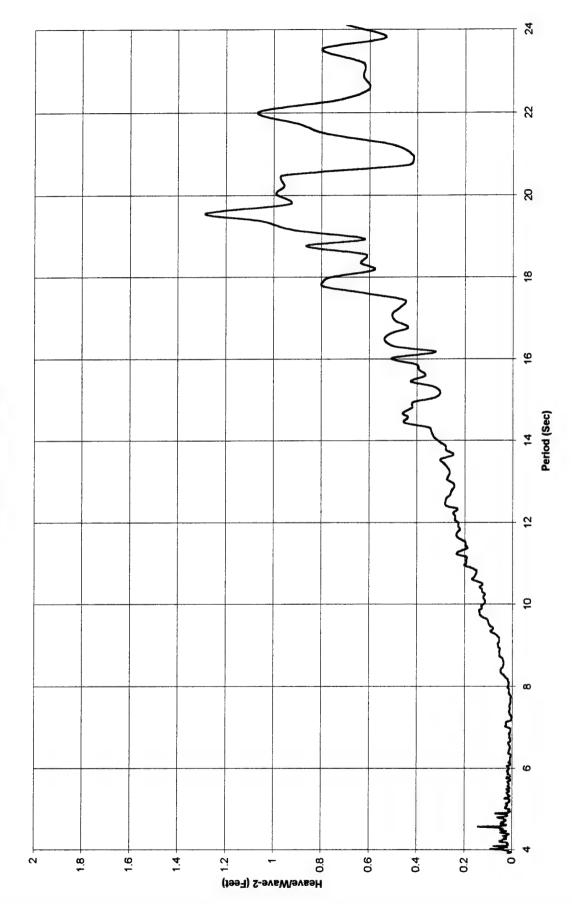
Test 363 - BT-2 RAO



Test 422 - PITCH RAO

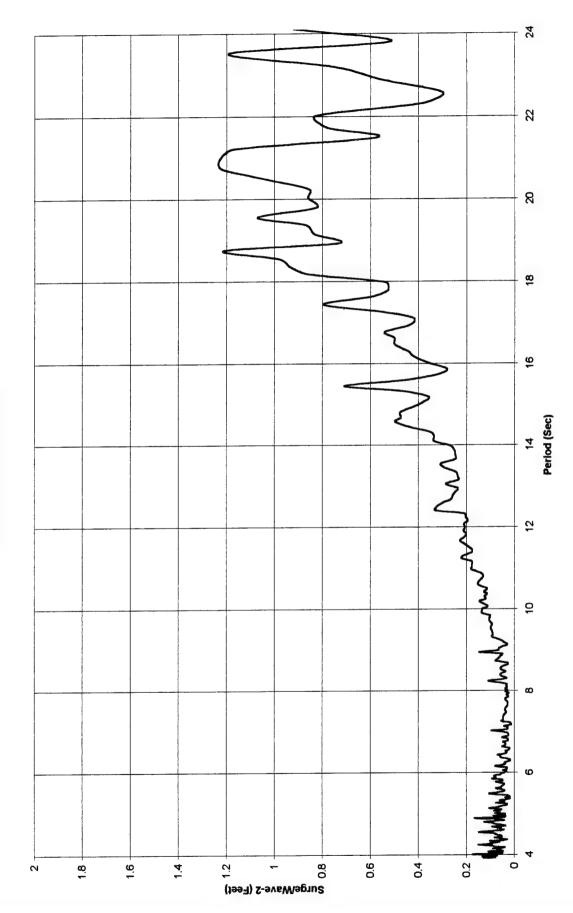


Test 422 - HEAVE RAO

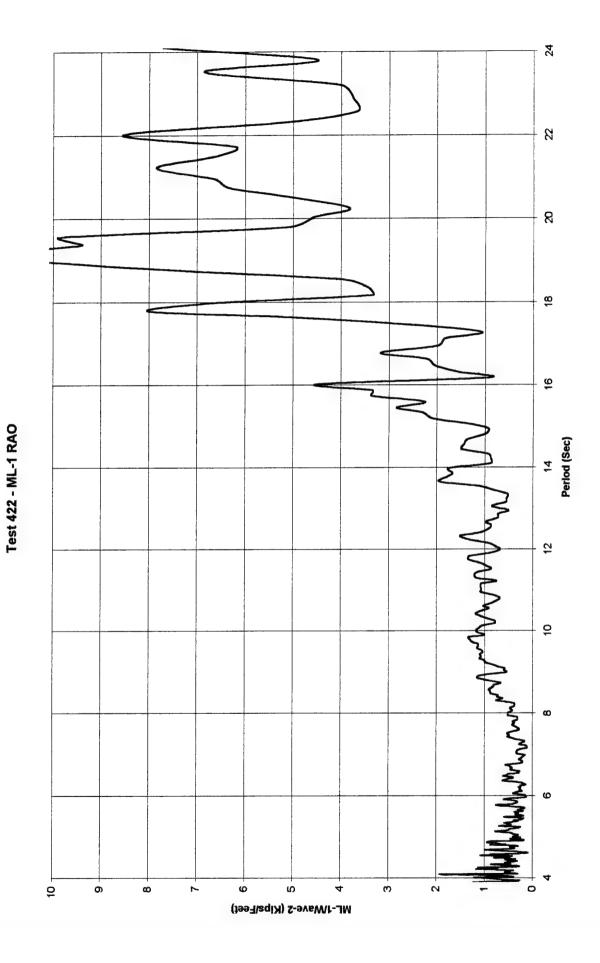


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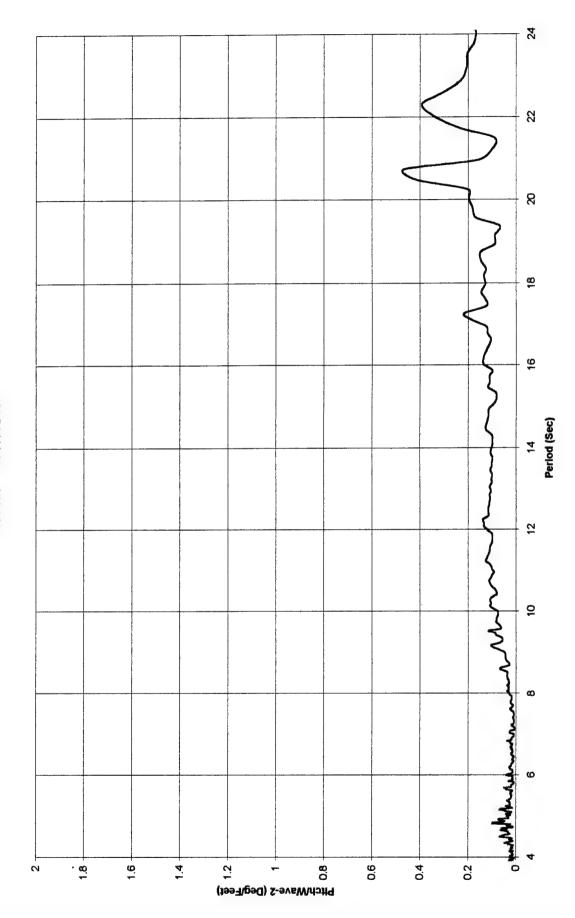
Test 422 - SURGE RAO



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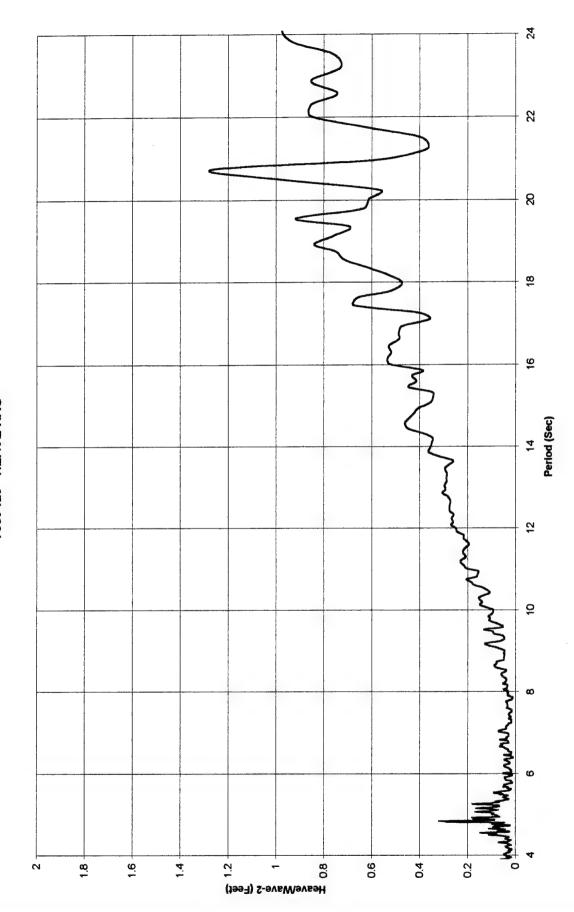


Test 423 - PITCH RAO



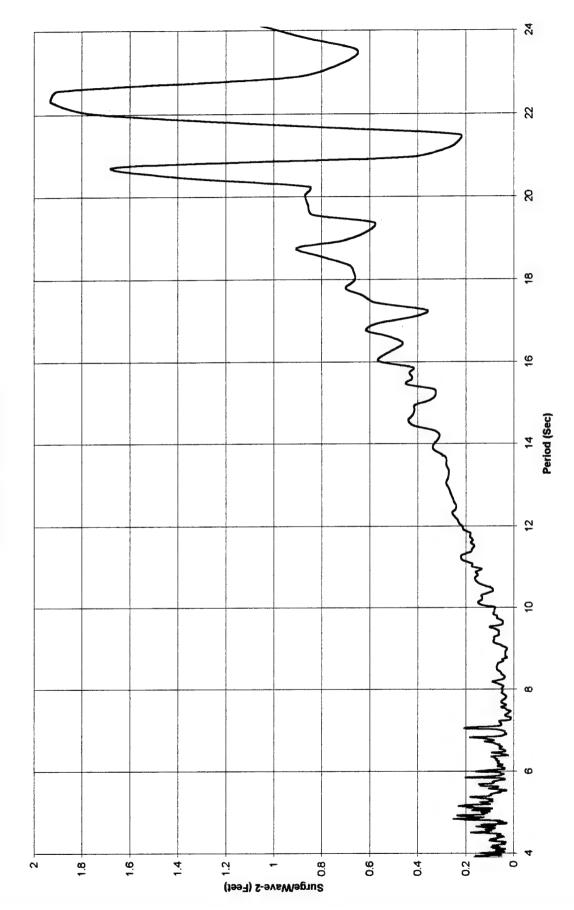
Dane 1

Test 423 - HEAVE RAO



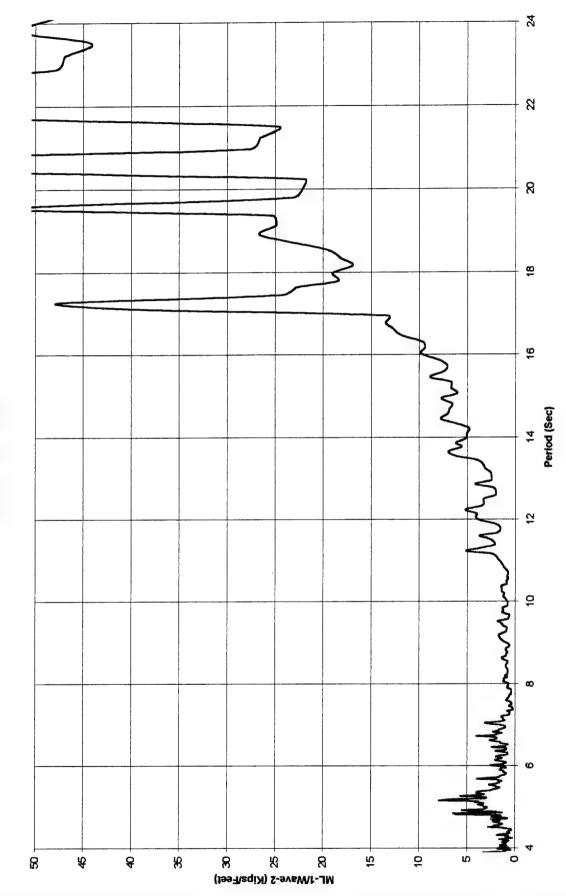
Page 1

Test 423 - SURGE RAO



Page 1

Test 423 - ML-1 RAO



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Period (Sec) 14

Test A556B - PITCH RAO

Page 1

22 20 18 16 Test A5568 - SURGE RAD Period (Sec) 7 유 ω ဖ (feeT) S-evsWegun2 0. 0. 0. 0. 70. 4. 6.0 0.8 0.3 0.2 0.1 0 0.7

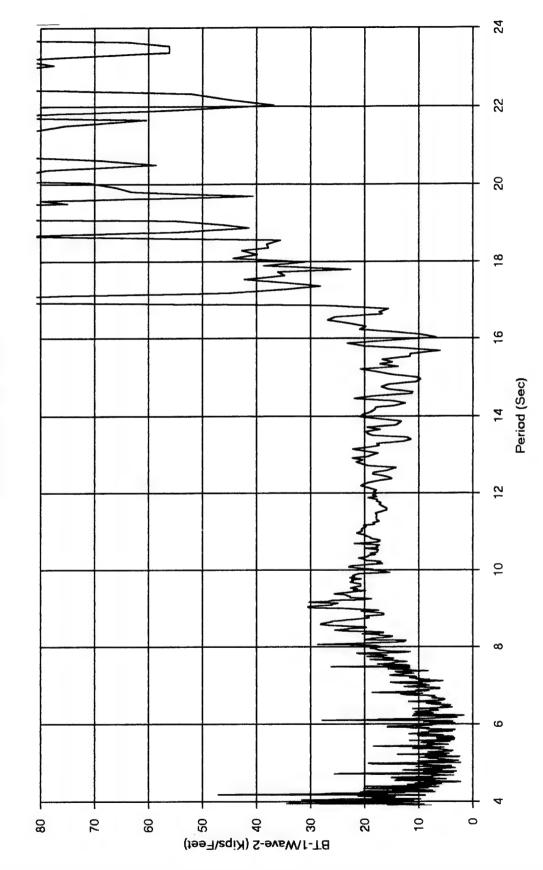
Page 1

24

ML-1/Wave-2 (Kips/Feet)

Page 1

24



Test A556B - BT-3 RA0

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Test A557 - HEAVE RAD

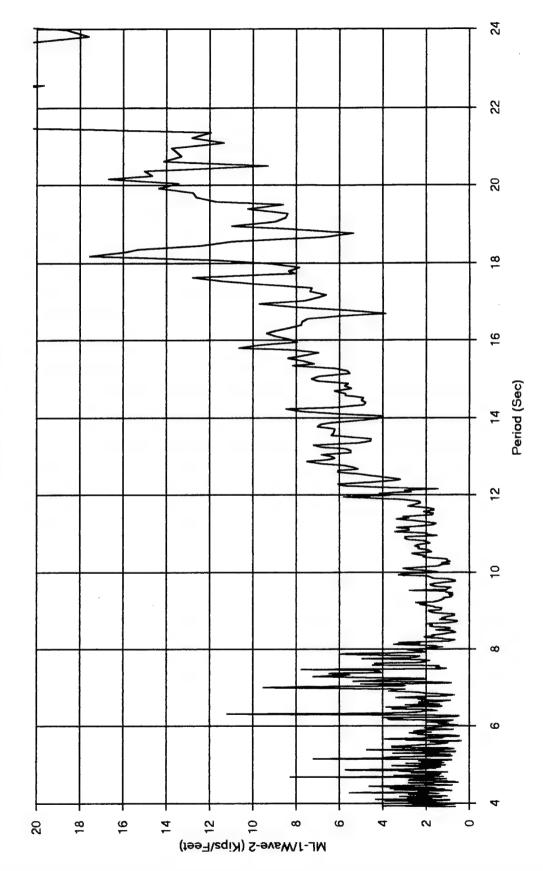
Page 1

Test A557 - PITCH RAD

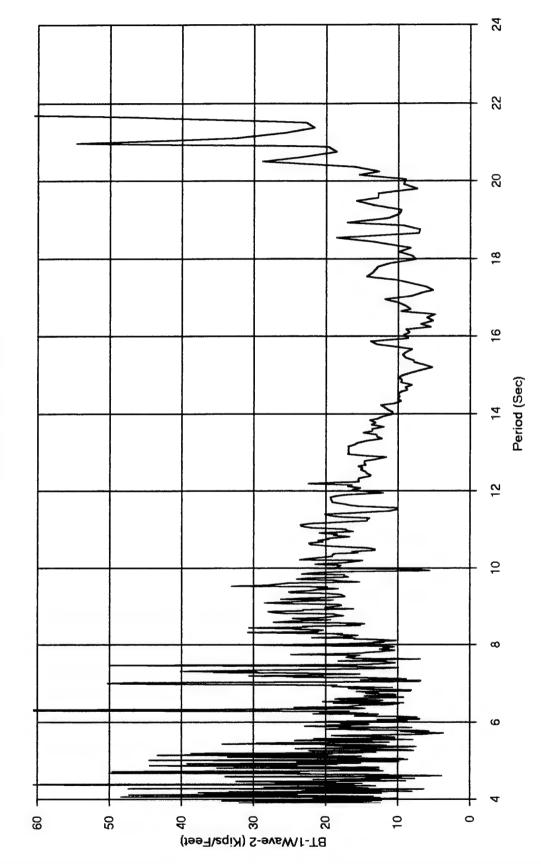
Page 1

Test A557 - SURGE RAD

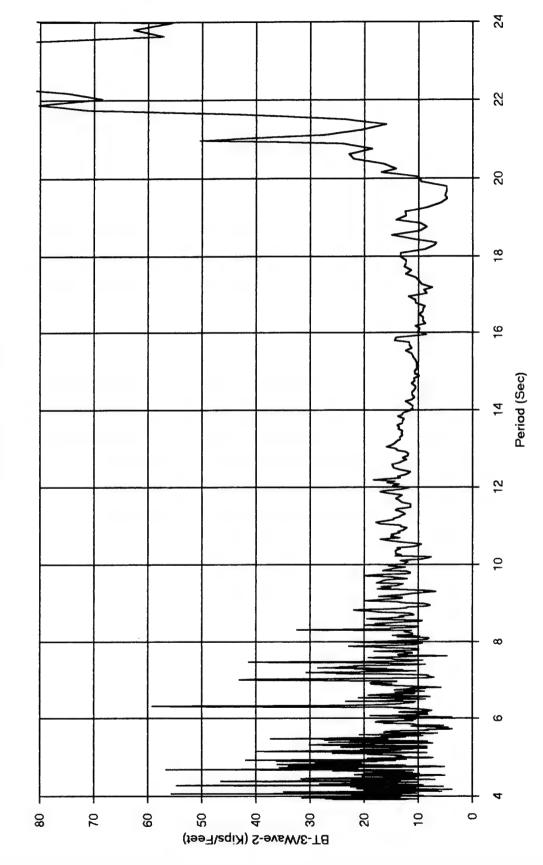
Page 1



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Test A586 - HEAVE RAO

Dane 1

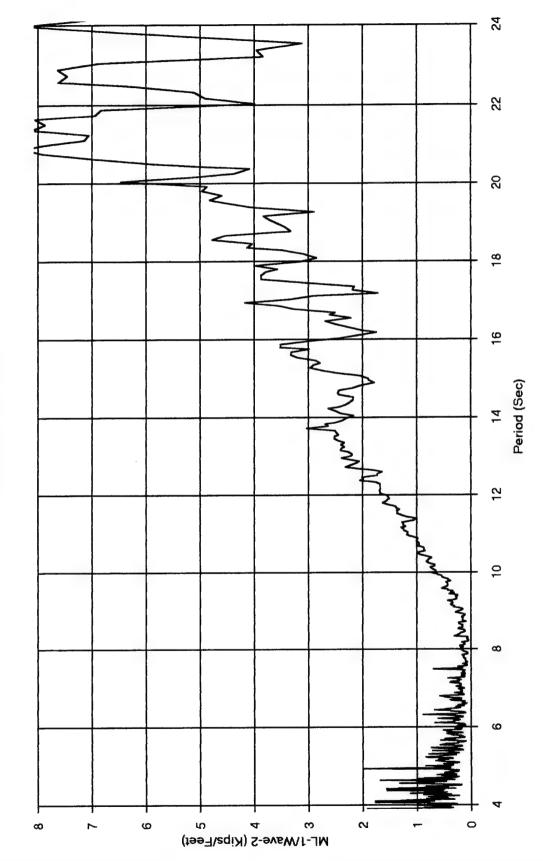
Test A586 - PITCH RAO

Page 1

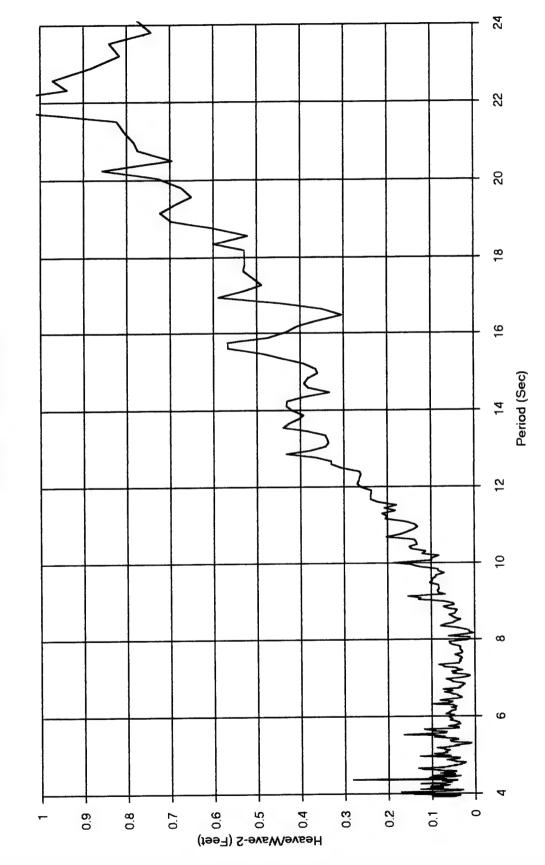
Test A586 - SURGE RAO

Page 1



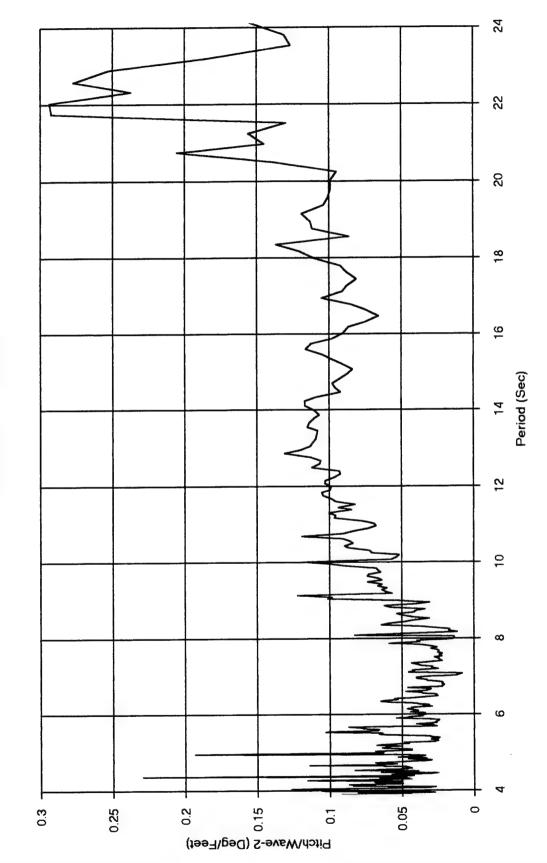


Page 1



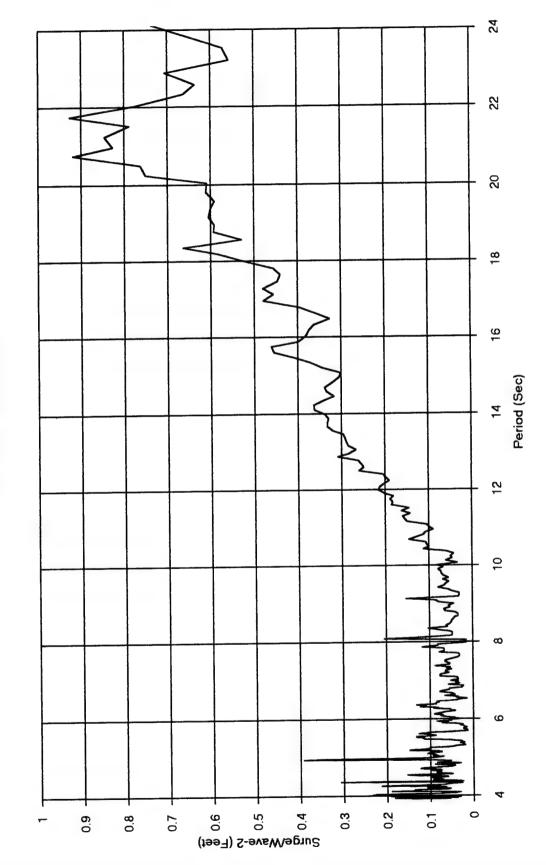
Page 1

Test A587 - PITCH RAO

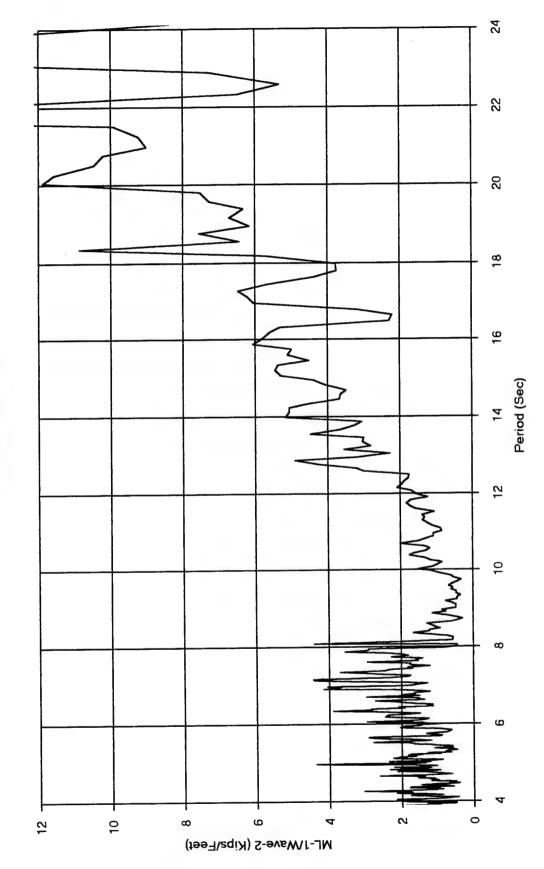


<sup>2</sup>age 1

Test A587 - SURGE RAD



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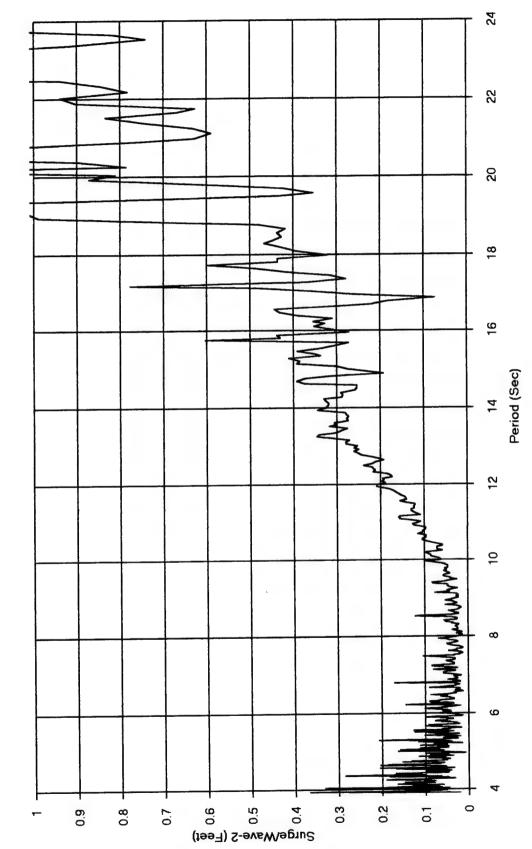
Test A598 - HEAVE RAD

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Test A598 - PITCH RAO

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Test A598 - SURGE RAO



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Test A598 · ML·1 RA0

Page 1

Test A598 - BT-1 RA0

Page 1

Test A598 - BT-3 RA0

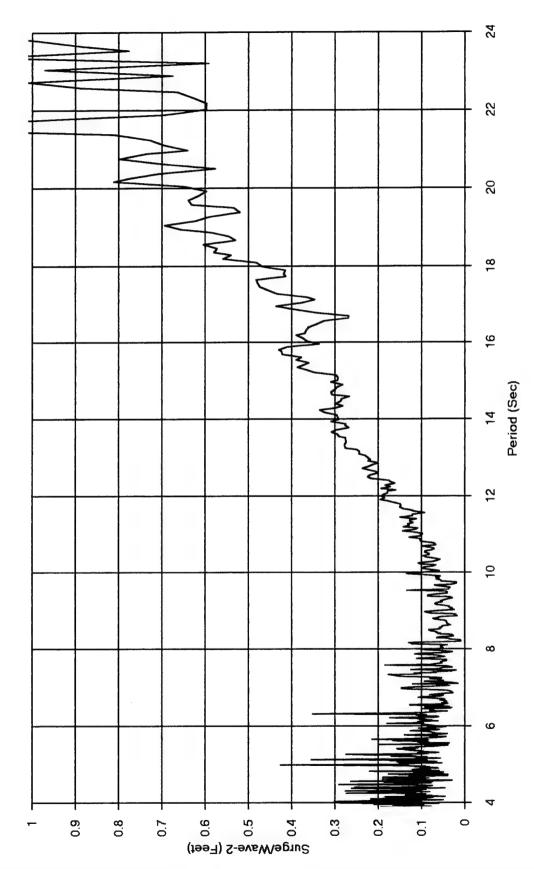
Page 1

Test A599 - HEAVE RAD

Page 1

Test A599 - PITCH RAD

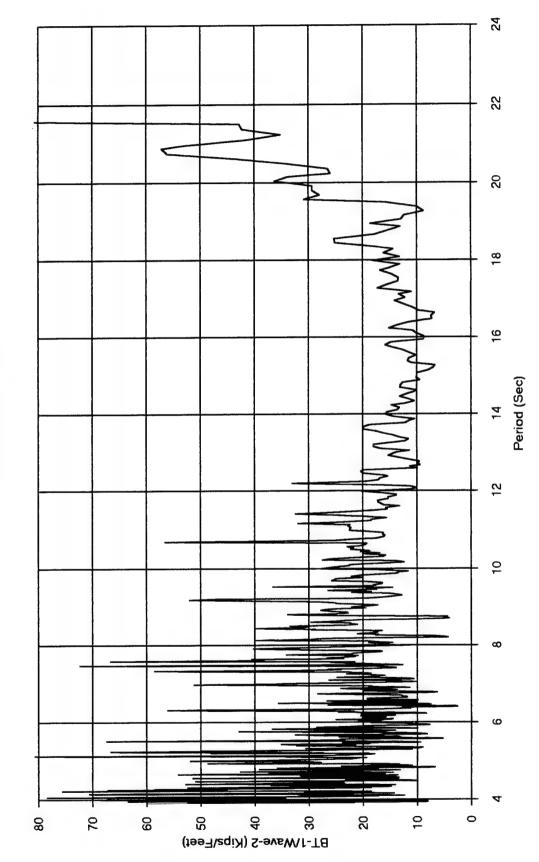
Page 1



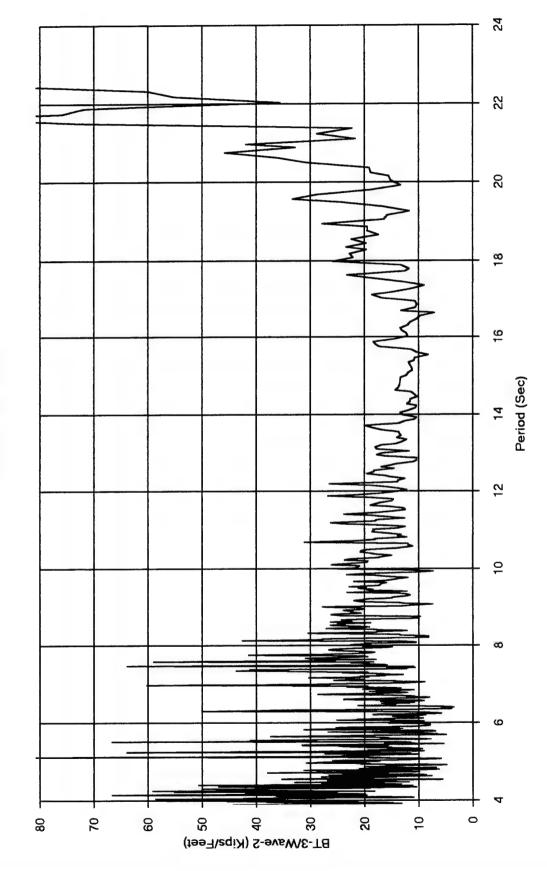
Test A599 - ML-1 RA0

Page 1

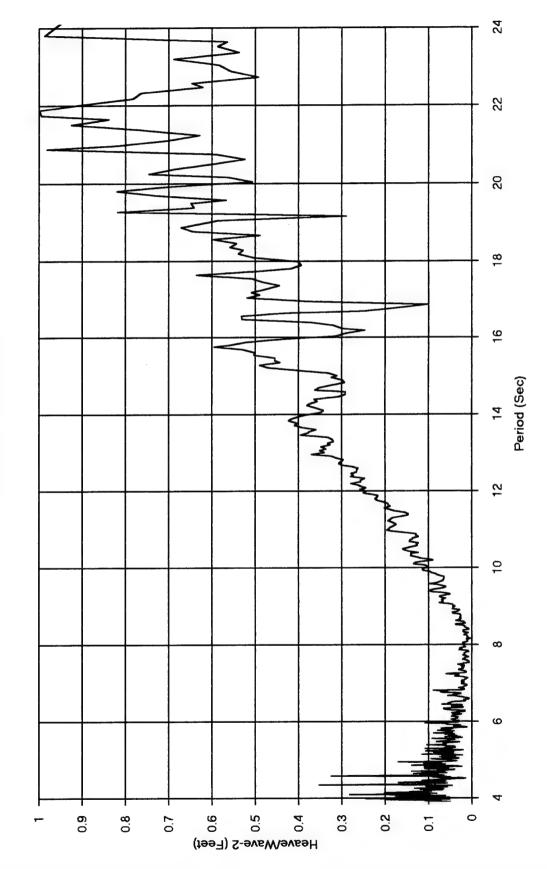




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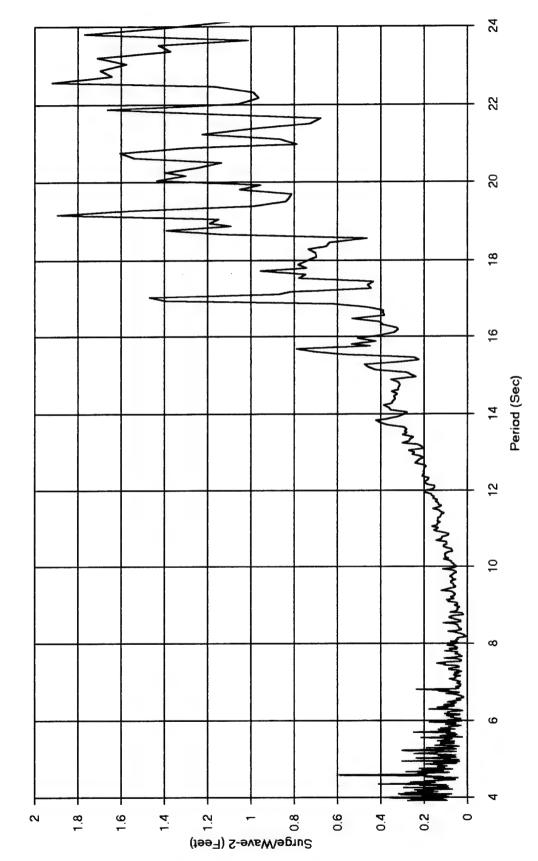
Page 1



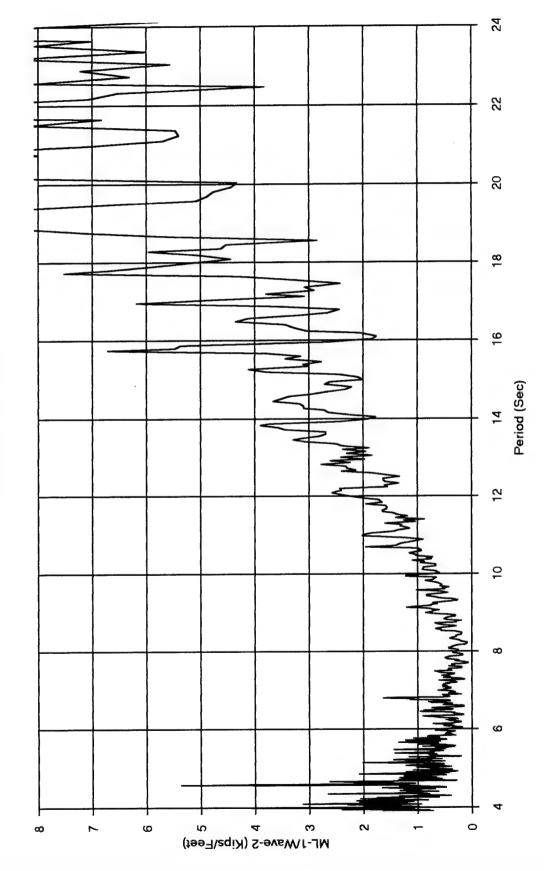
Page 1

Test A608 - PITCH RA0

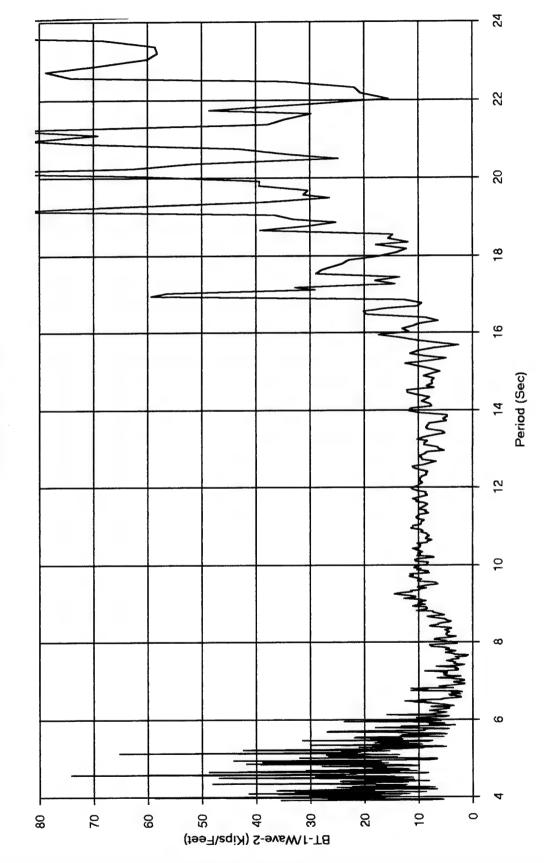
Page 1



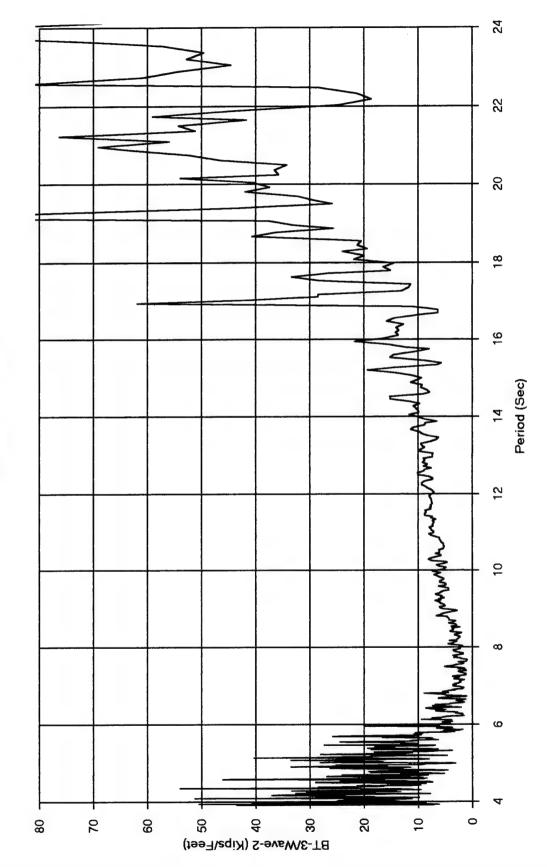
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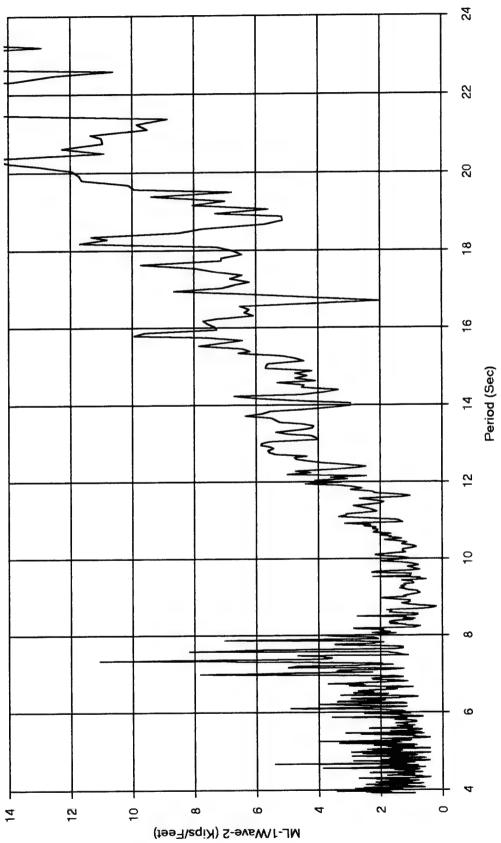
Period (Sec)

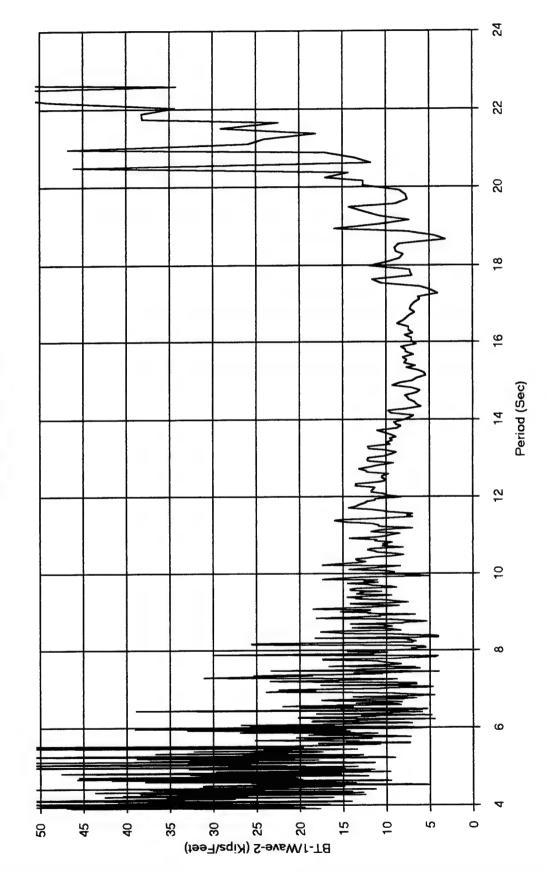
Test A609 - PITCH RAD

Page 1

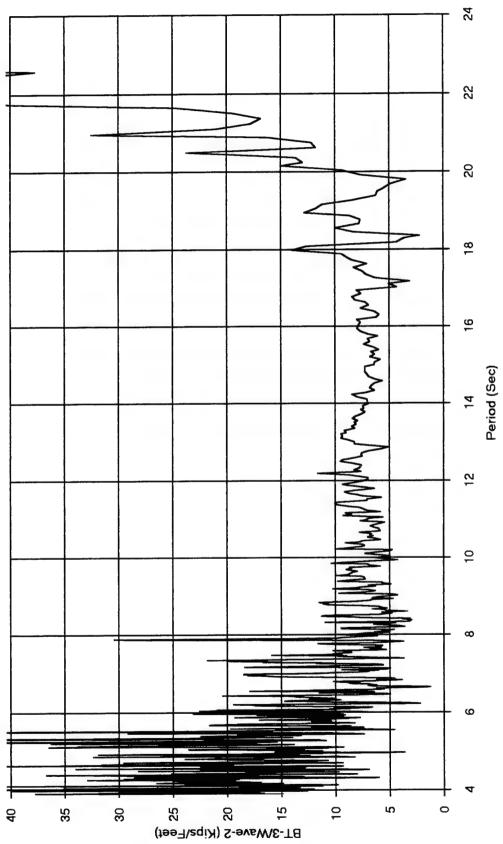
Test A609 - SURGE RAO

Page 1





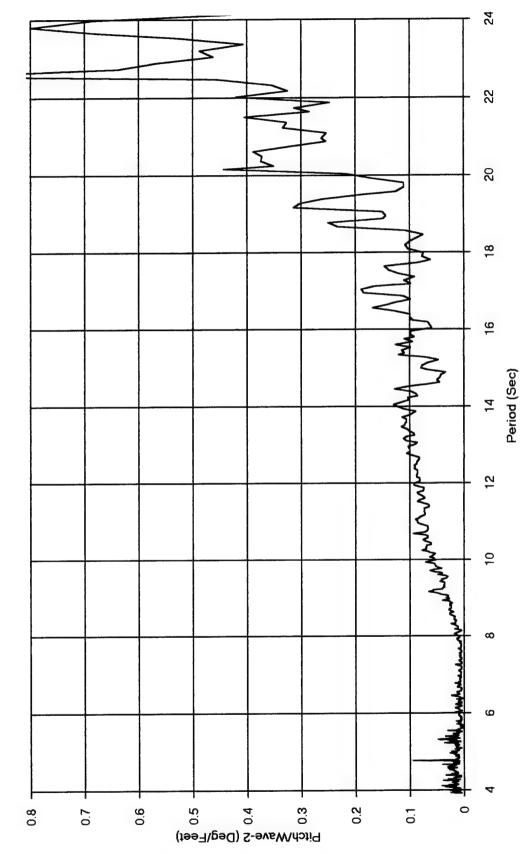
Page 1



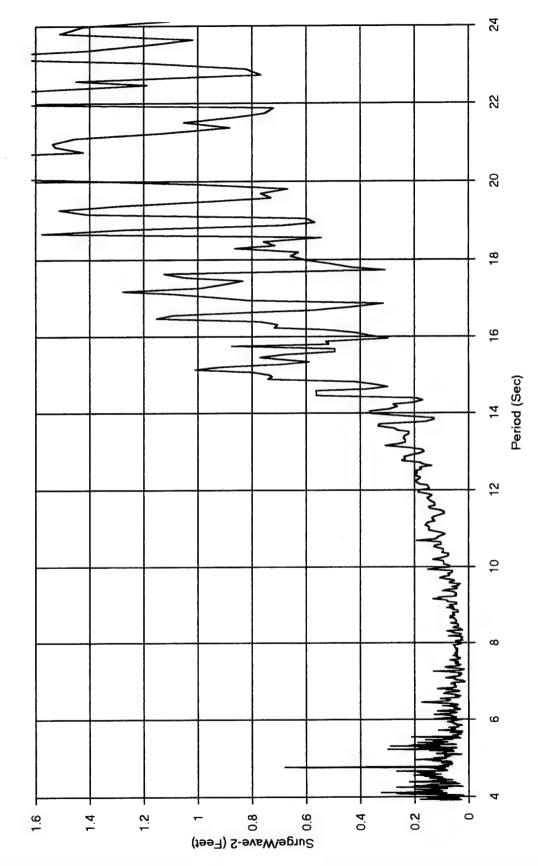
Page 1

Test A708 - HEAVE RAO

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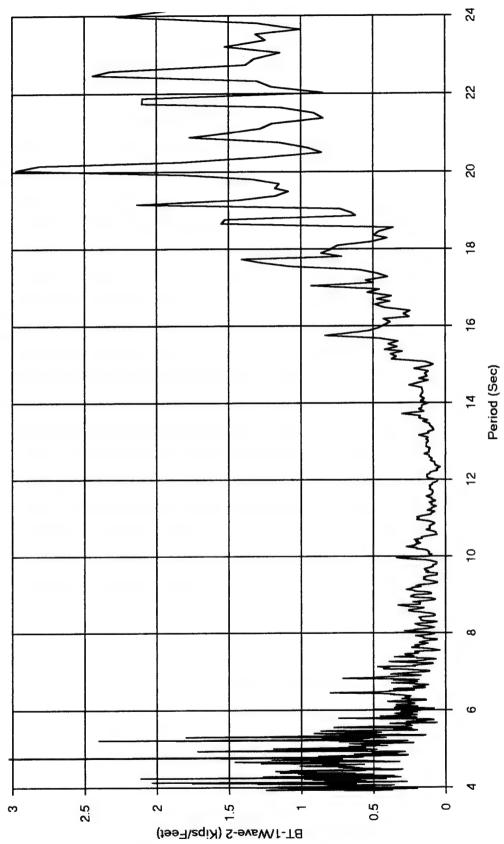
Page 1



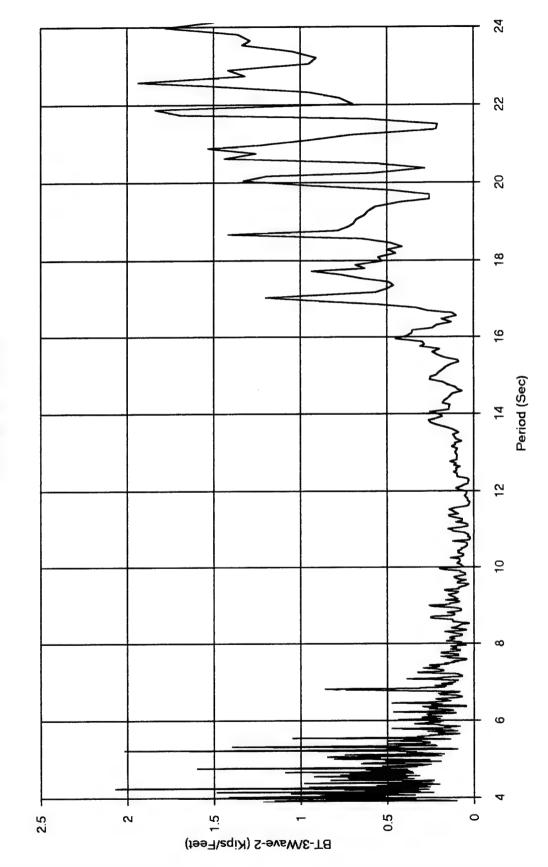
Page 1

Test A708- ML-1 RA0

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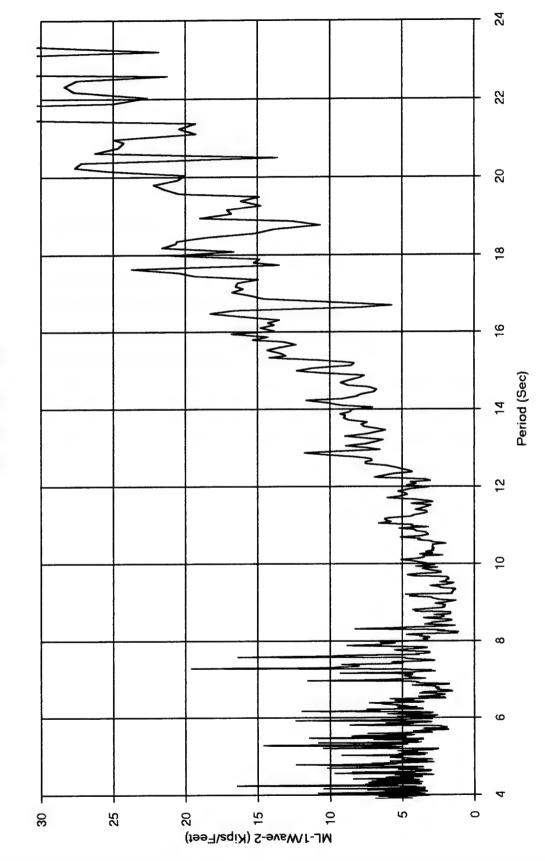
Test A709 - HEAVE RAD

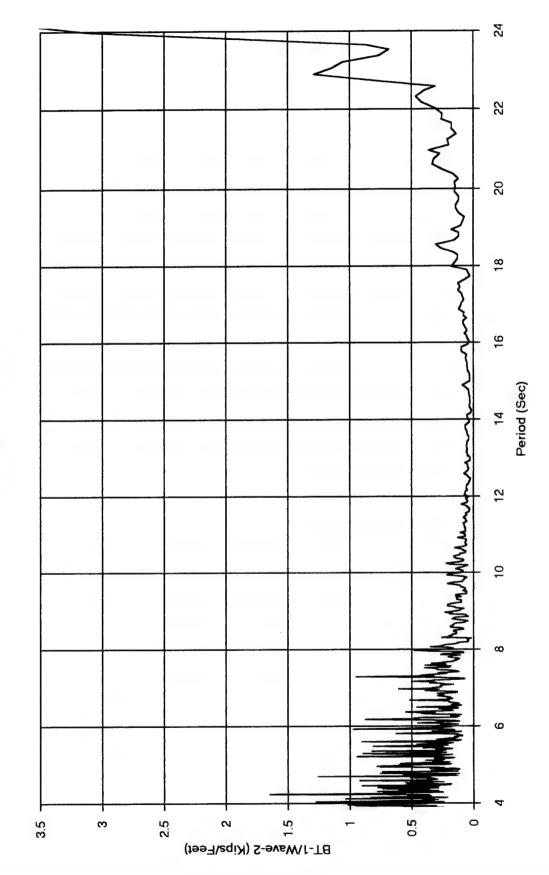
Page 1

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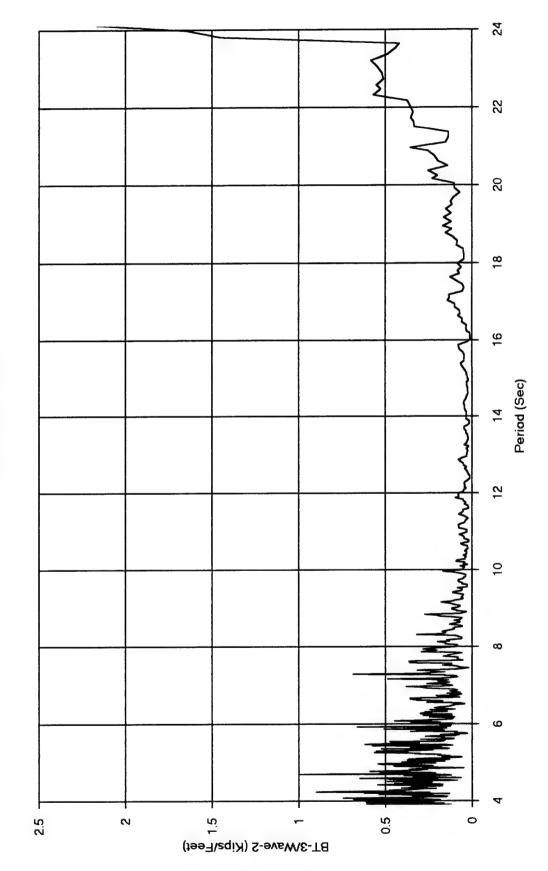
Period (Sec)

Page 1





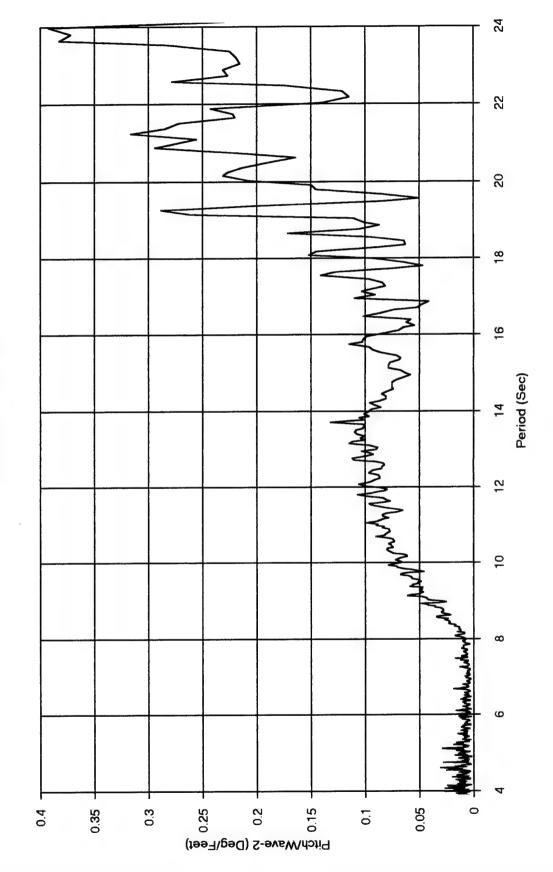
Page 1



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Test A808 - HEAVE RAO

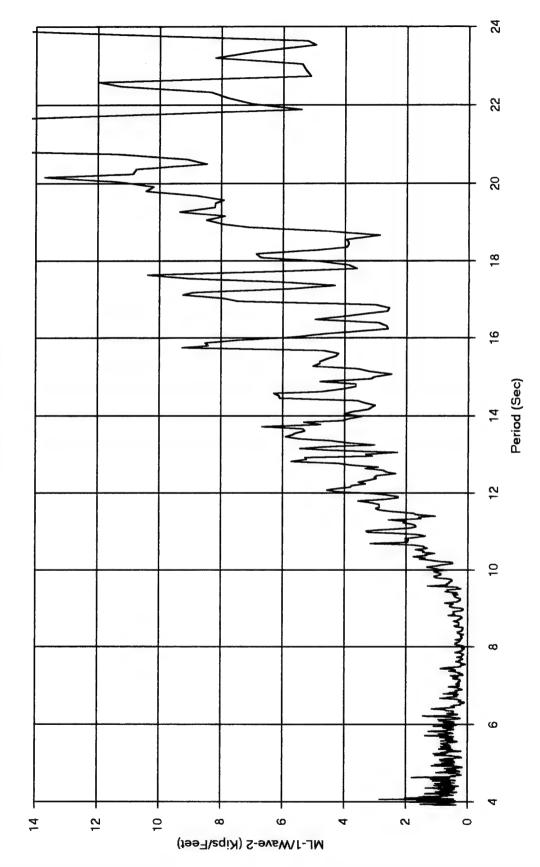
Page 1



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Test A808 · SURGE RAO

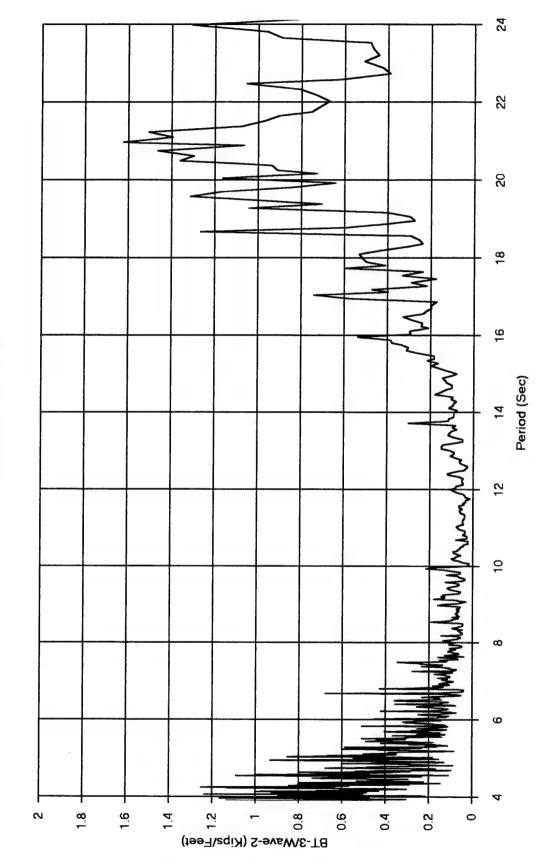
Jane 1



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Test A808 · BT·1 RA0

Page 1



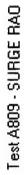
Page 1

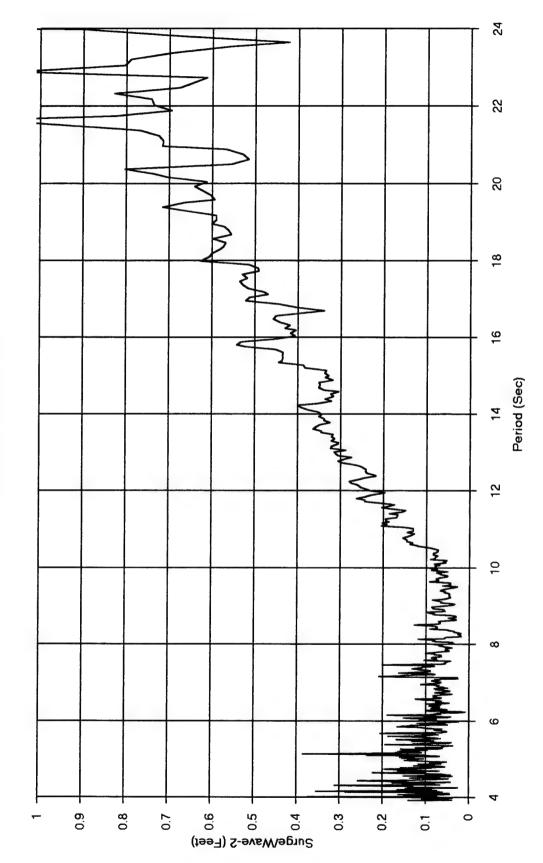
Test A809 - HEAVE RAD

Page 1

Test A809 - PITCH RAD

Page 1





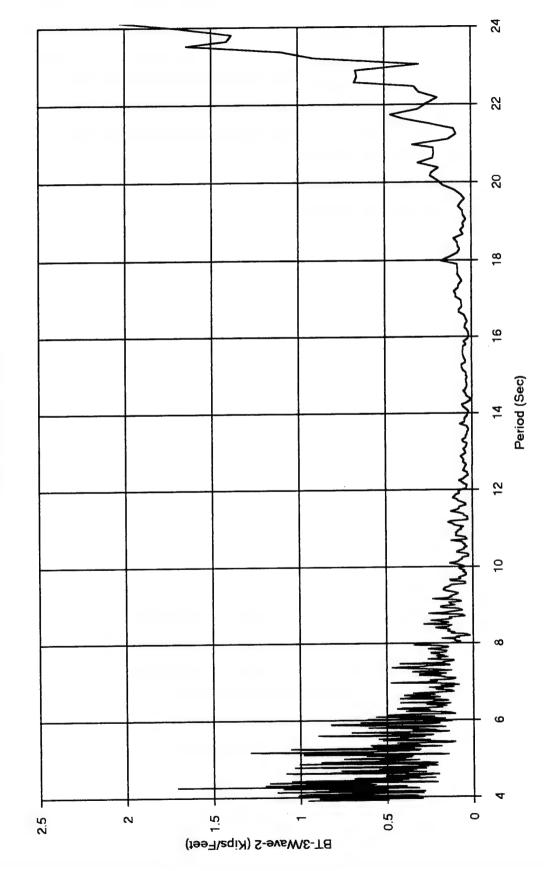
Page 1

Test A809 - ML-1 RA0

Page 1

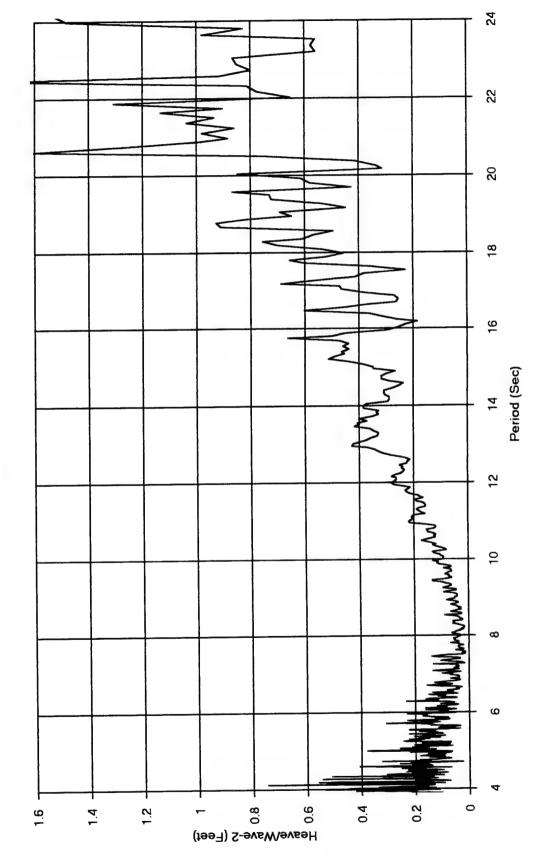
Test A809- BT-1 RA0

Page 1

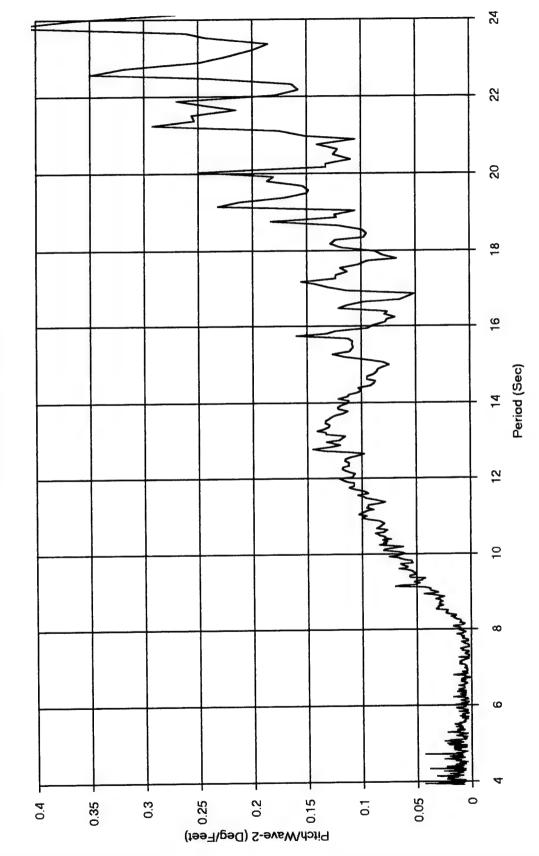


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Test A908 - HEAVE RAD



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Test A908 - SURGE RAD

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Test A908 - ML-1 RA0

Page 1

Test A908 - BT-1 RA0

Page 1

Test A908 - BT-3 RA0

Page 1

Test A909 - HEAVE RAD

Page 1

Test A909 - PITCH RAO

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14 Period (Sec)

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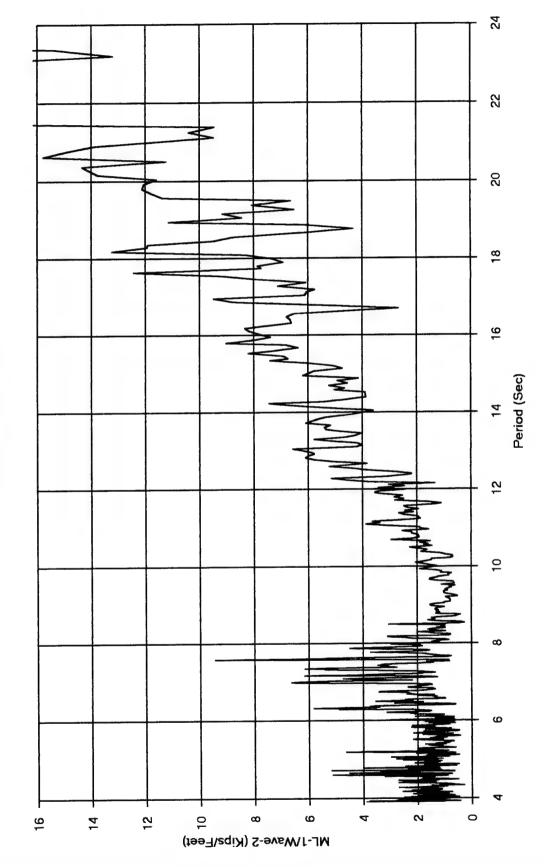
16

12

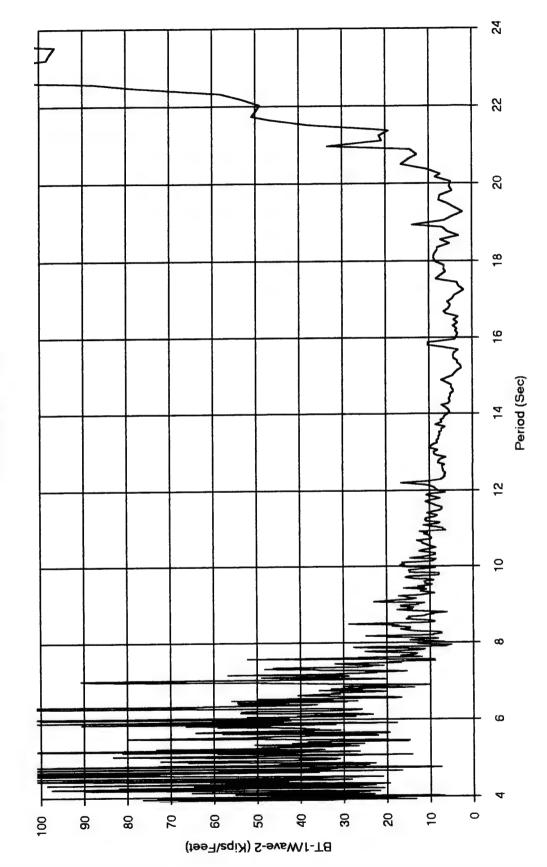
9

0.2

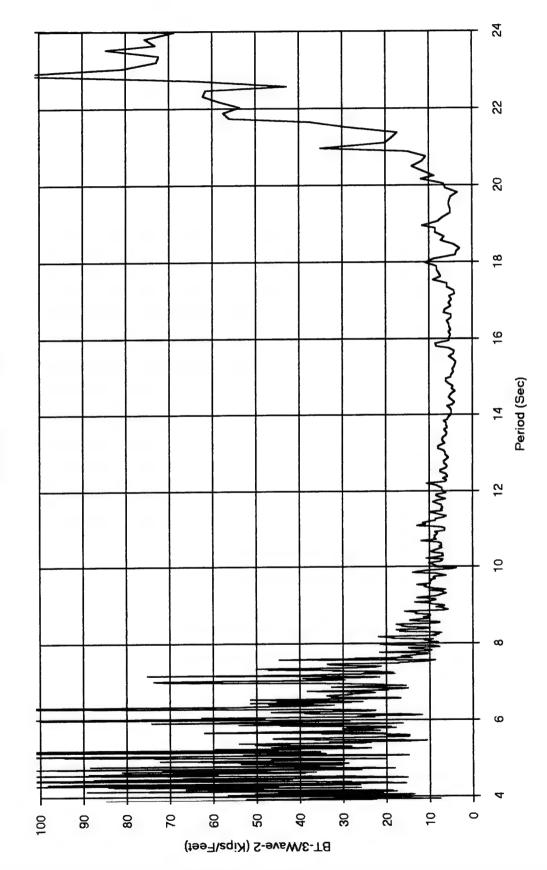
0.1



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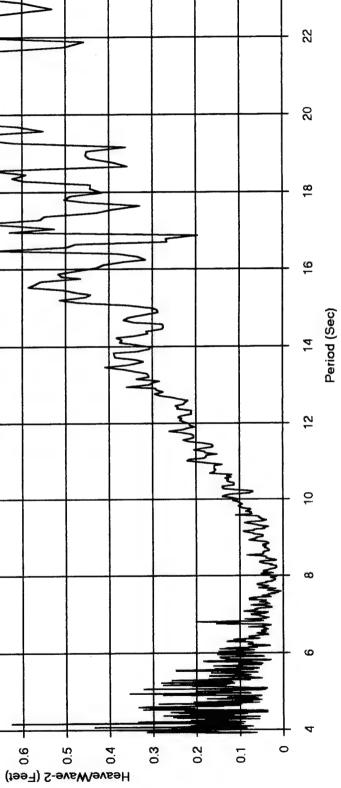


Page 1

6.0

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Page 1

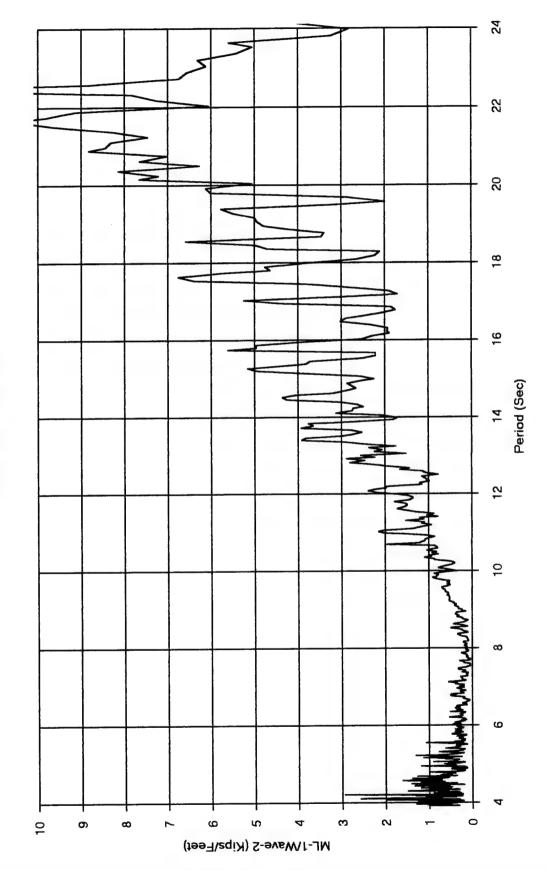
24

Test A1008 - PITCH RA0

Page 1

Test A1008 - SURGE RAD

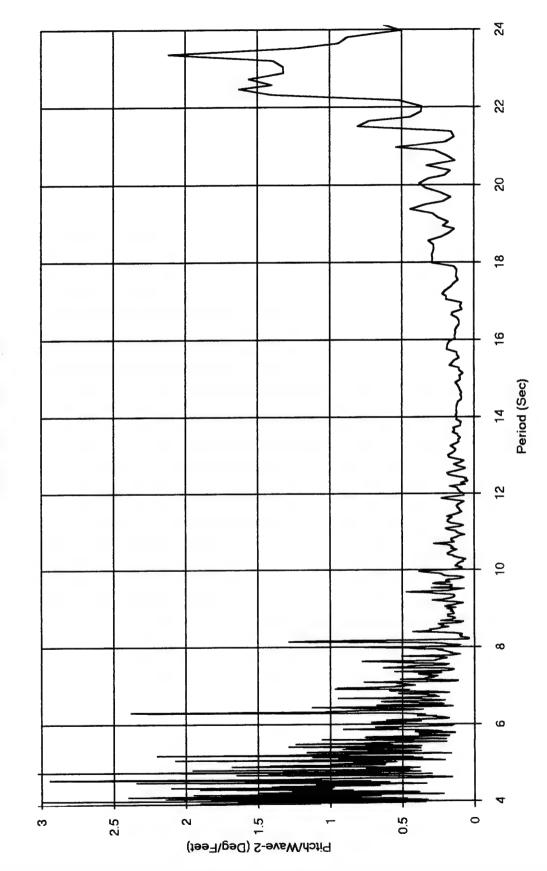
Page 1



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Test A1009 - HEAVE RAD

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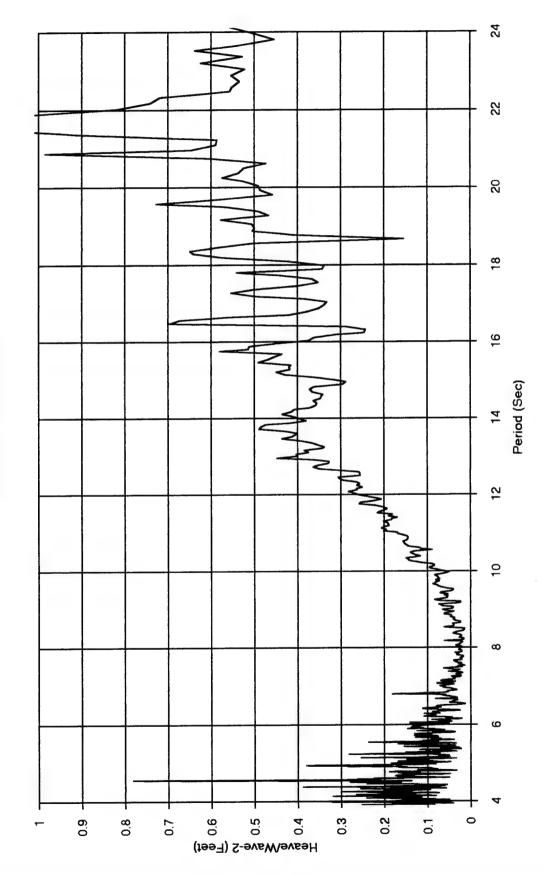
Page 1

Test A1009 - SURGE RAO

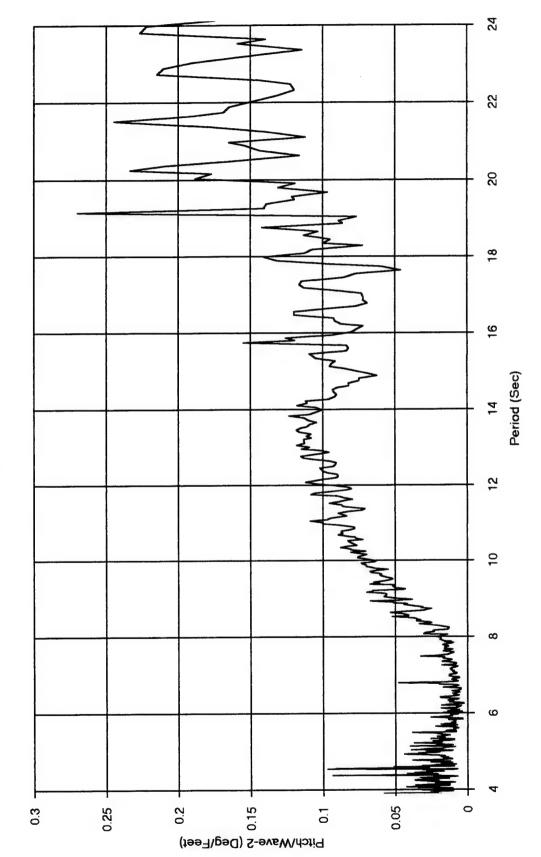
Page 1

Test A1009 - ML-1 RA0

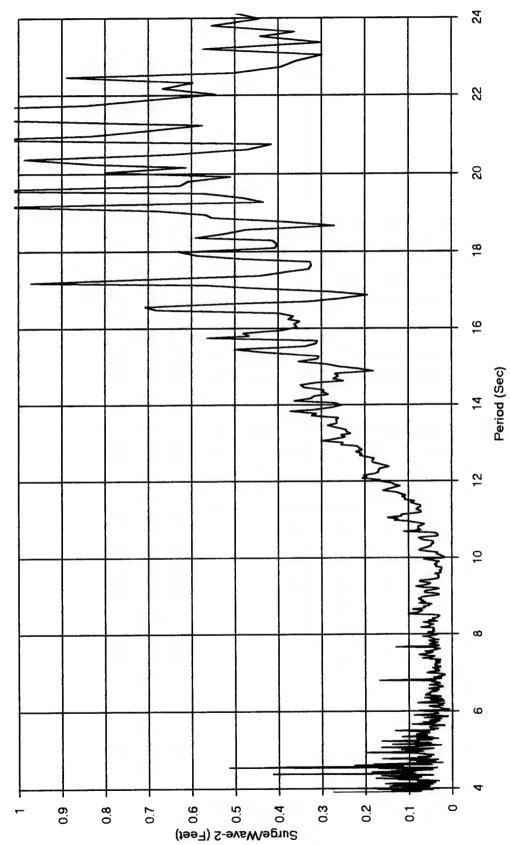
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Page 1

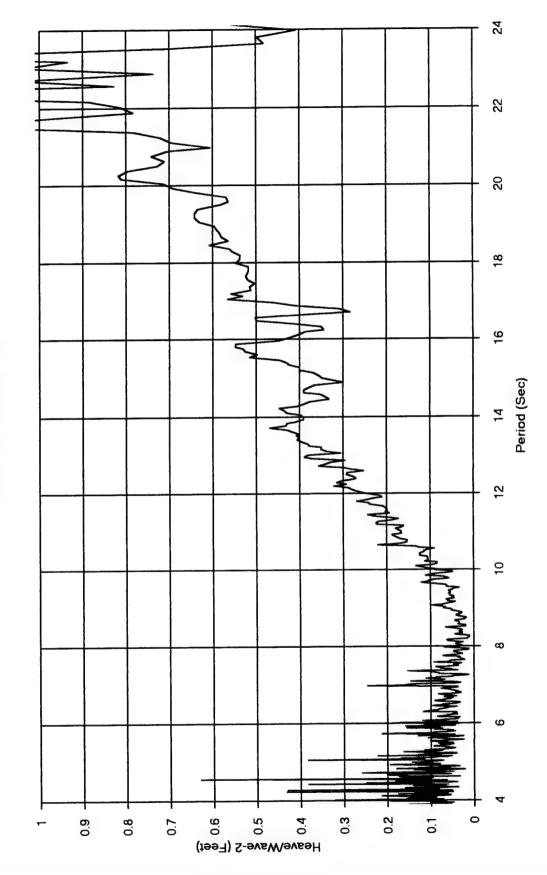


Page 1



Test A1108 - ML-1 RA0

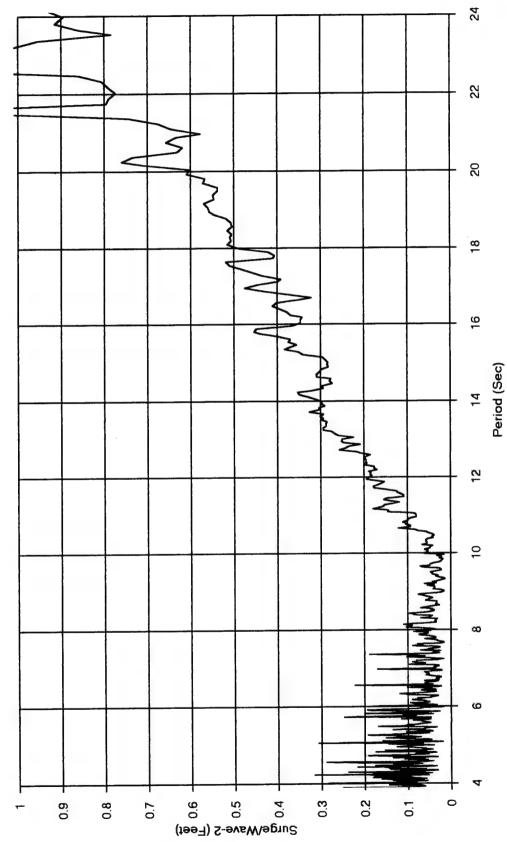
Page 1



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Test A1109 - PITCH RA0

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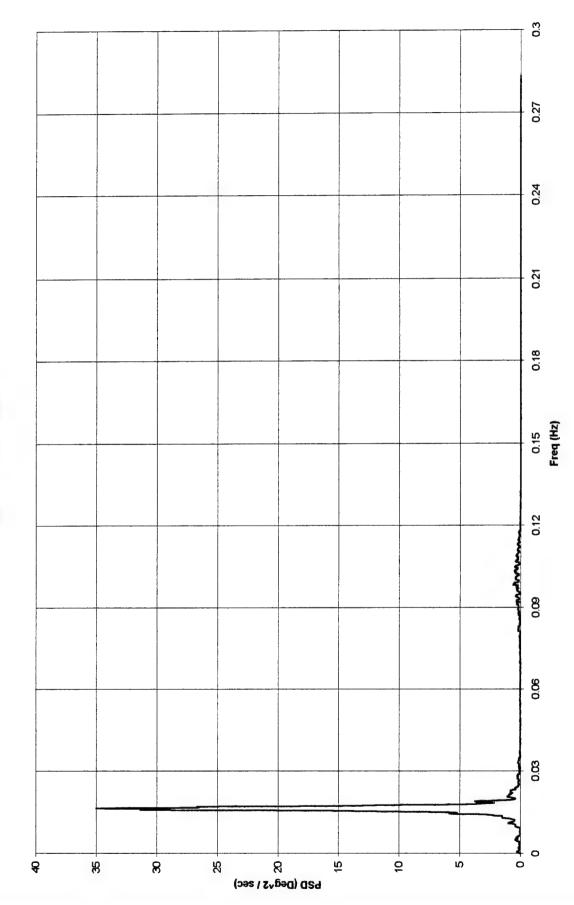
Page 1

ML-1/Wave-2 (Kips/Feet)

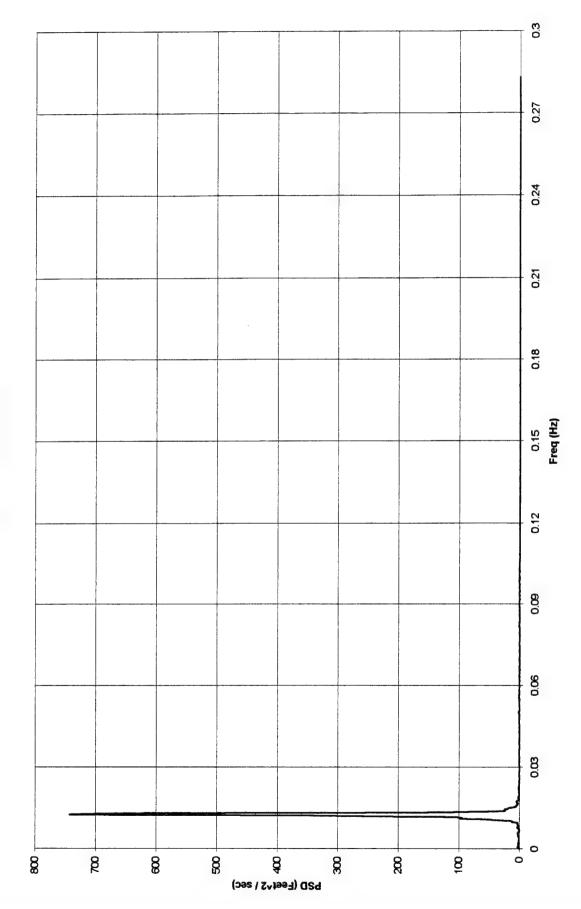
Page 1

## APPENDIX H SPECTRAL DENSITY PLOTS

Test 121 - PITCH PSD

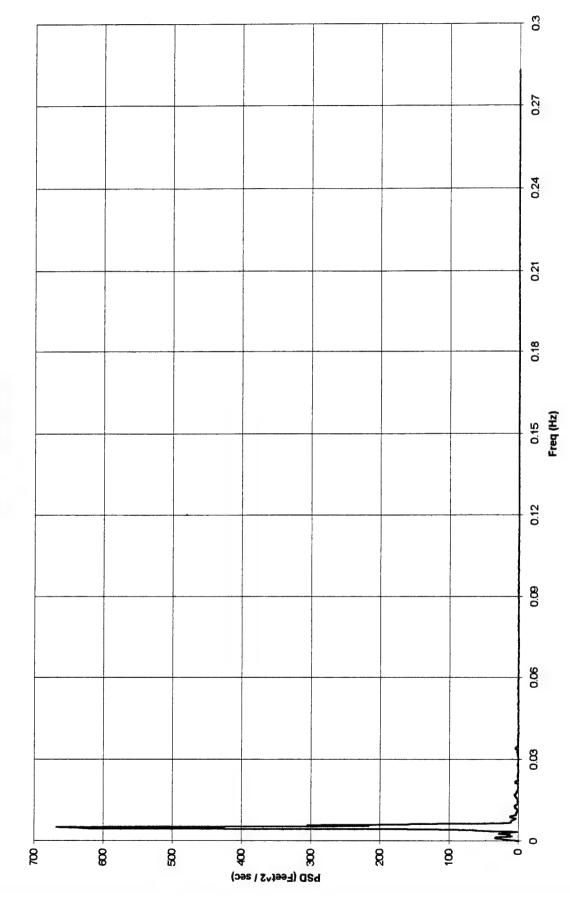


Test 121 - HEAVE PSD



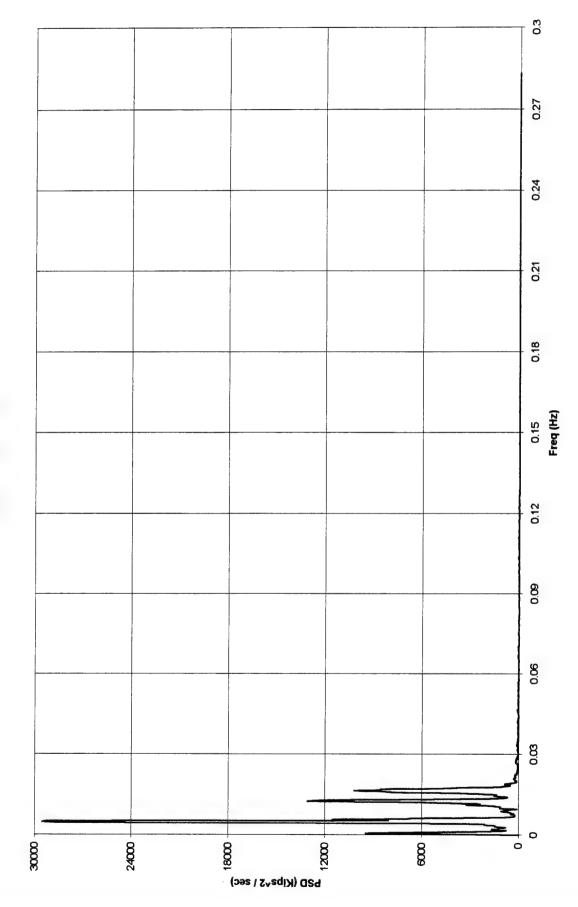
Page 1

Test 121 - SURGE PSD

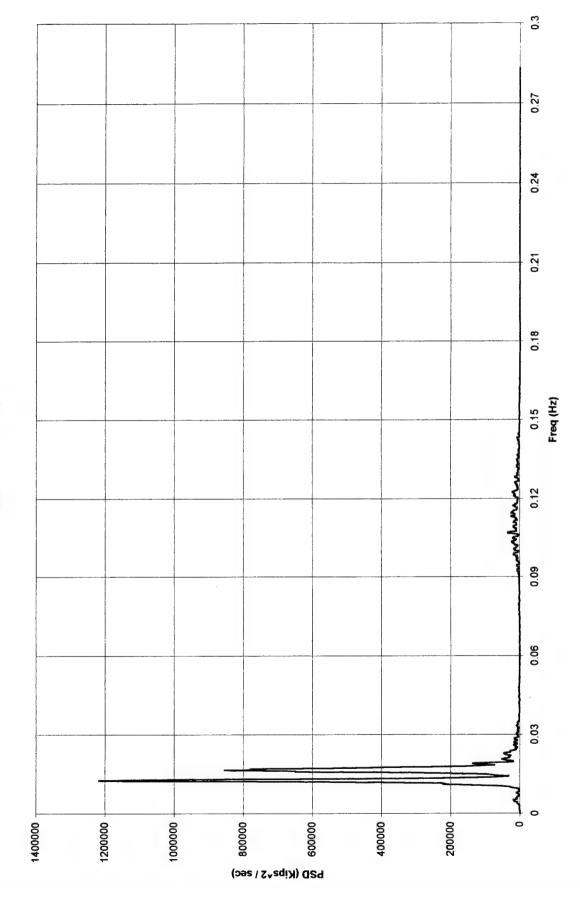


Page 1

Test 121 - ML-1 PSD

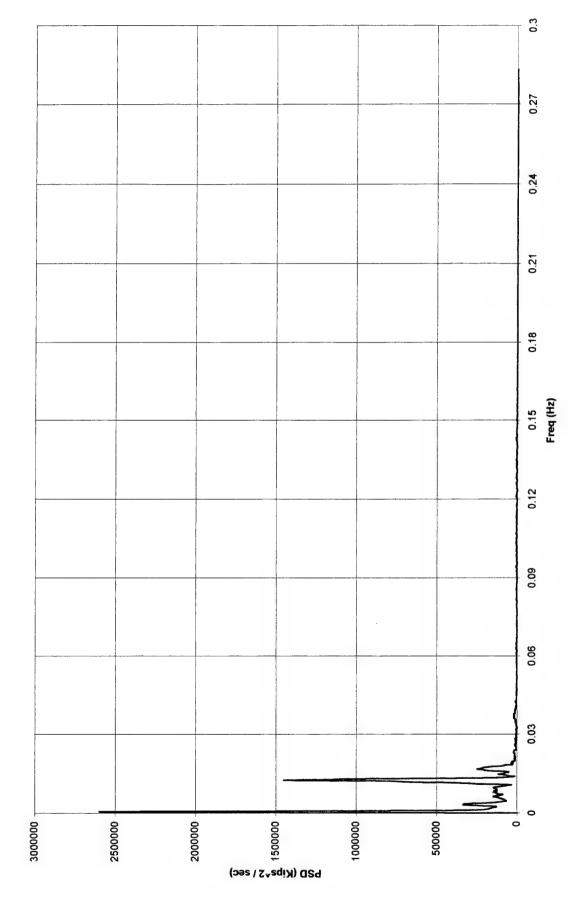


Test 121 - BT-1 PSD



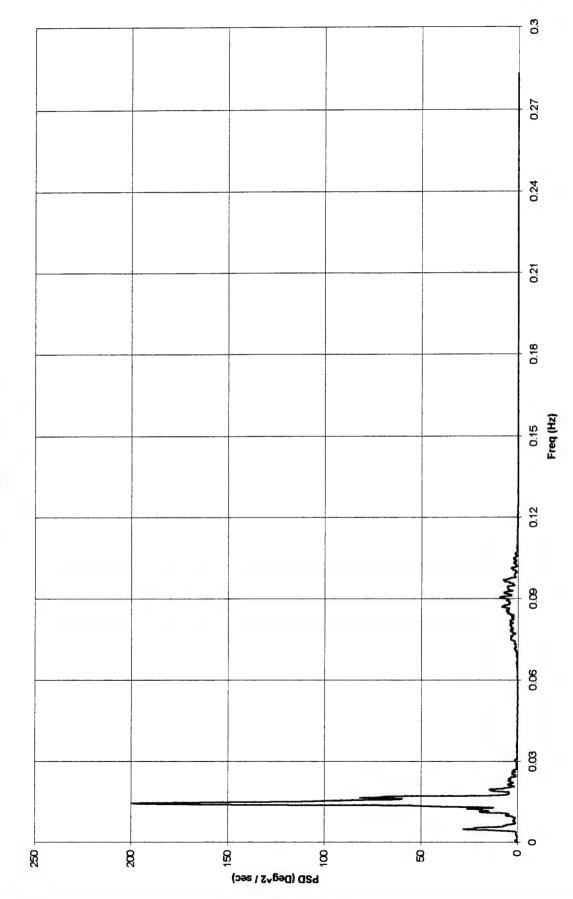
Page 1

Test 121 - BT-2 PSD

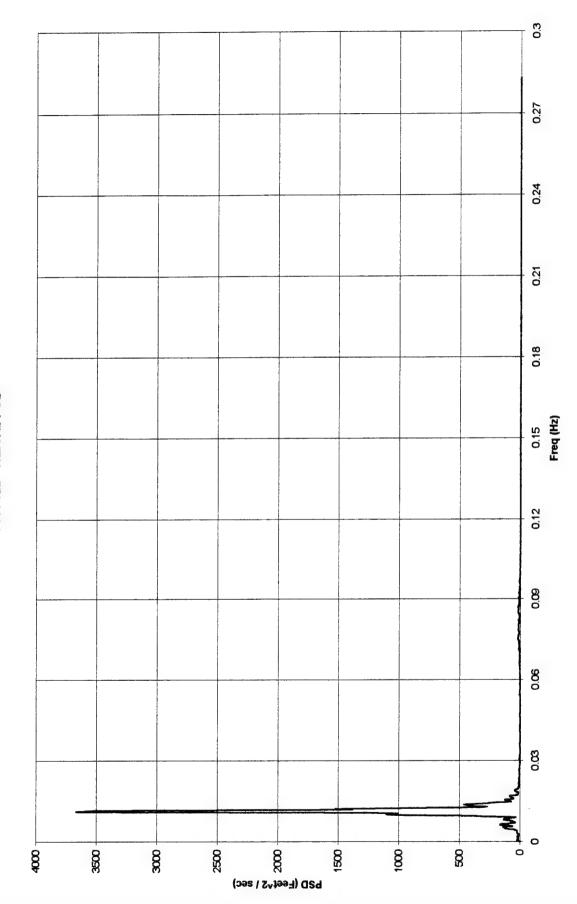


Page 1

Test 122 - PITCH PSD

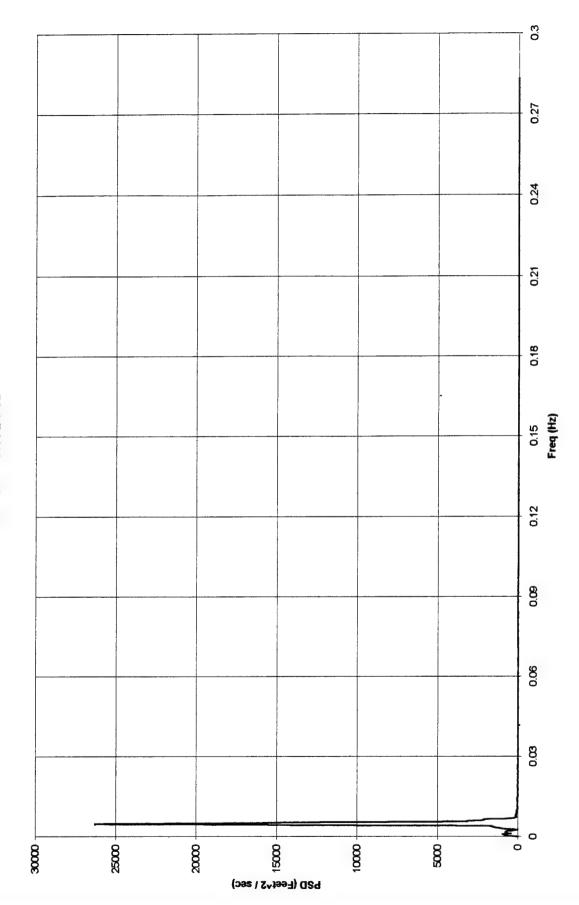


Test 122 - HEAVE PSD



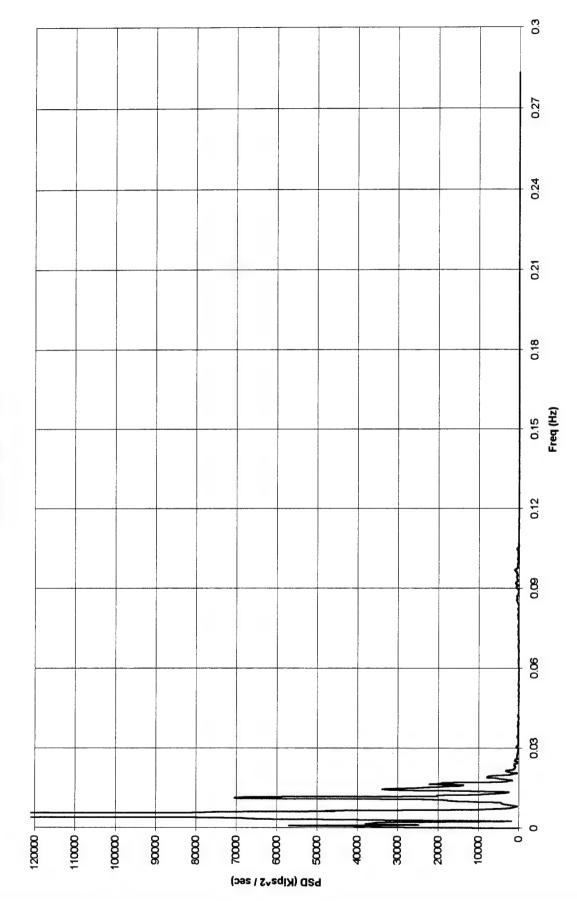
Page 1

Test 122 - SURGE PSD



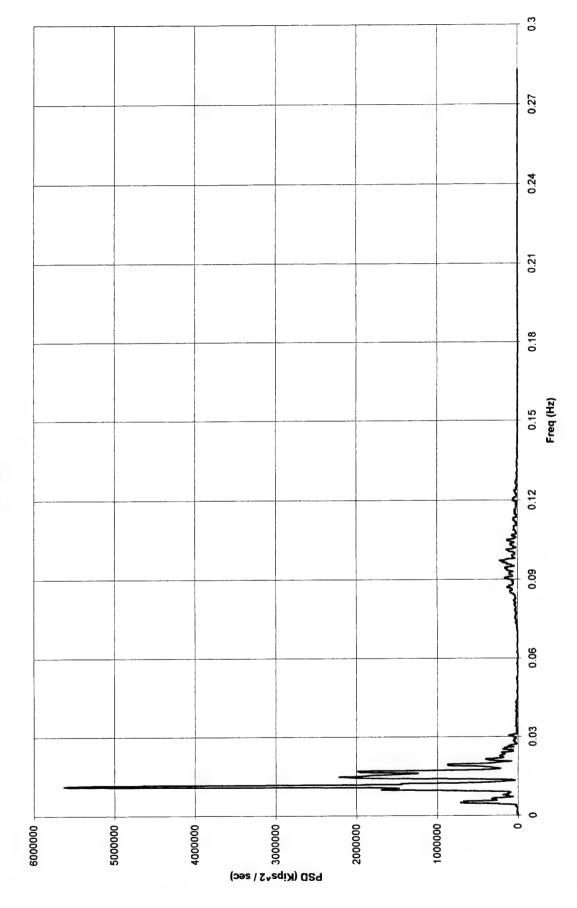
Page 1

Test 122 - ML-1 PSD



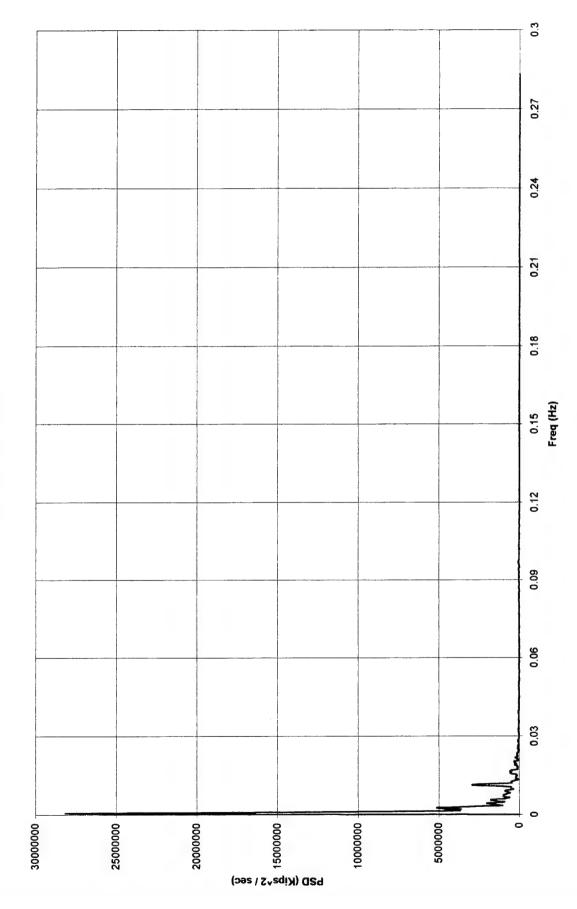
Page 1

Test 122 - BT-1 PSD



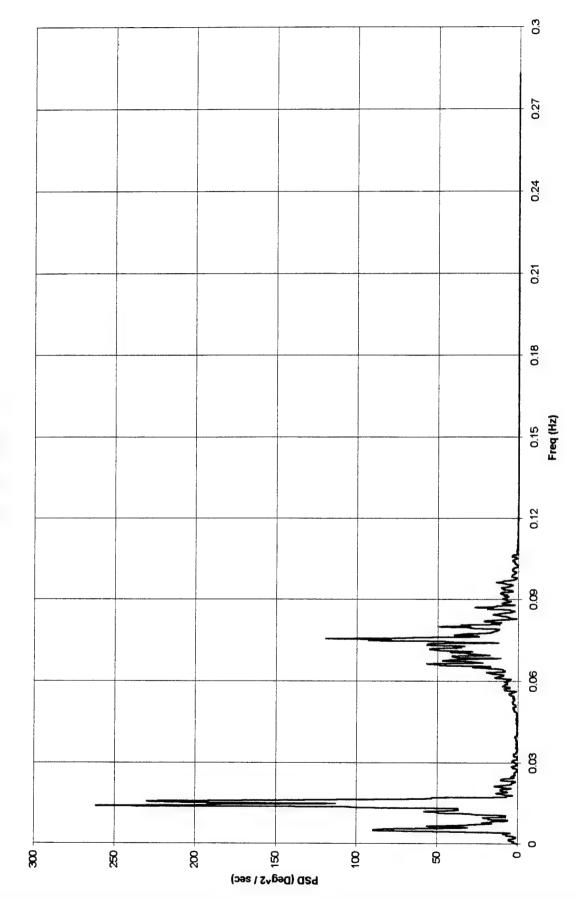
Page 1

Test 122 - BT-2 PSD



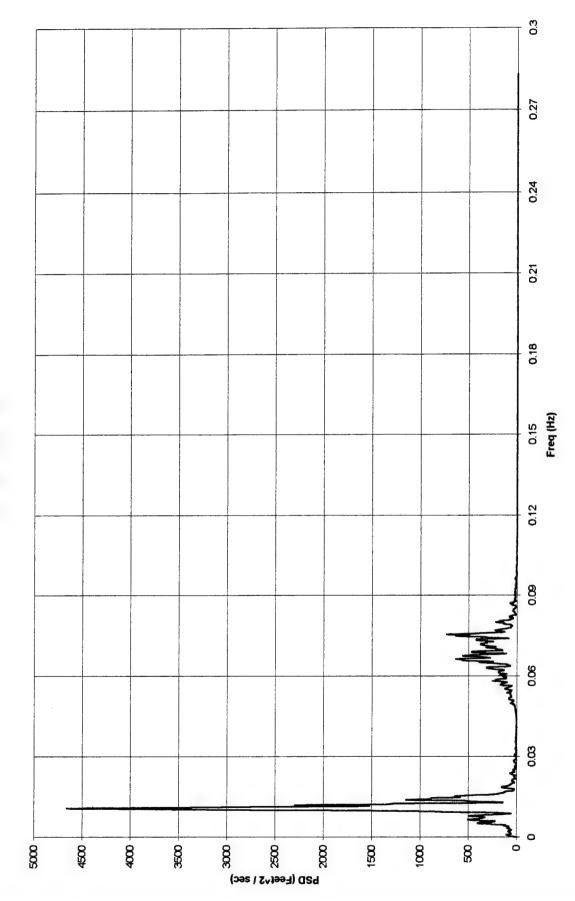
Page 1

Test 123 - PITCH PSD

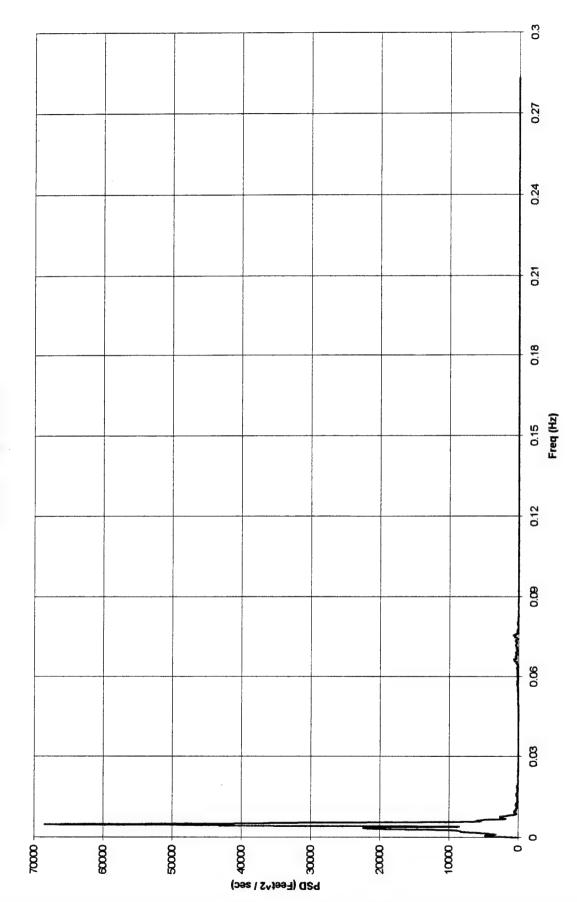


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Test 123 - HEAVE PSD

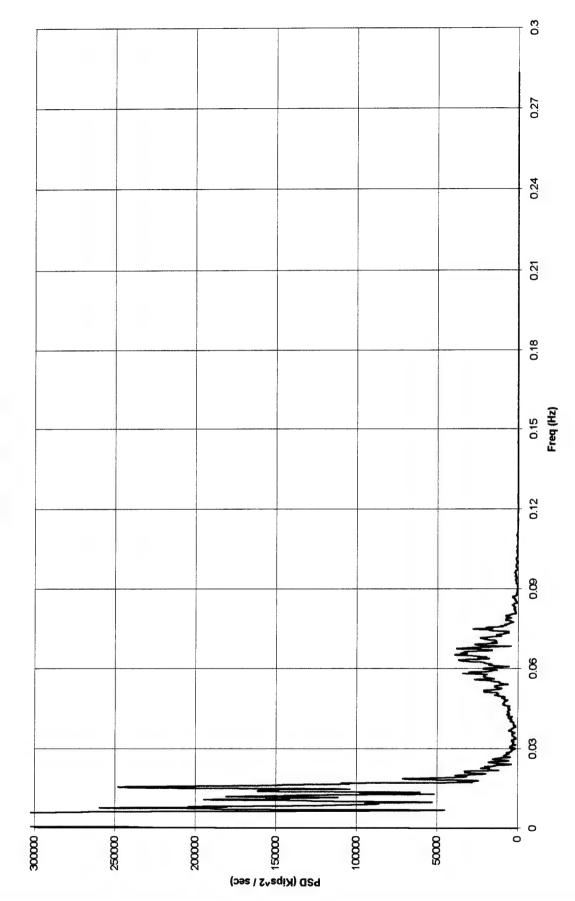


Test 123 - SURGE PSD



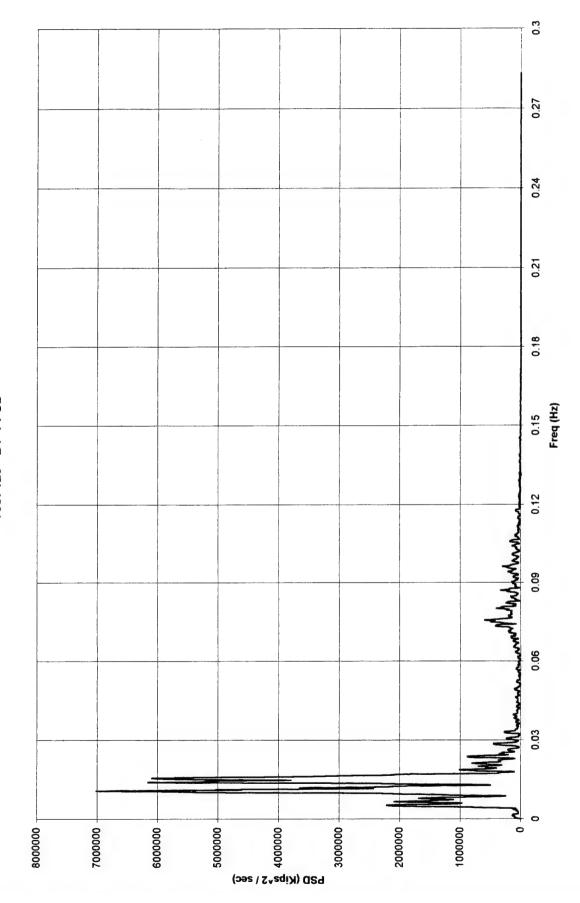
Page 1

Test 123 - ML-1 PSD



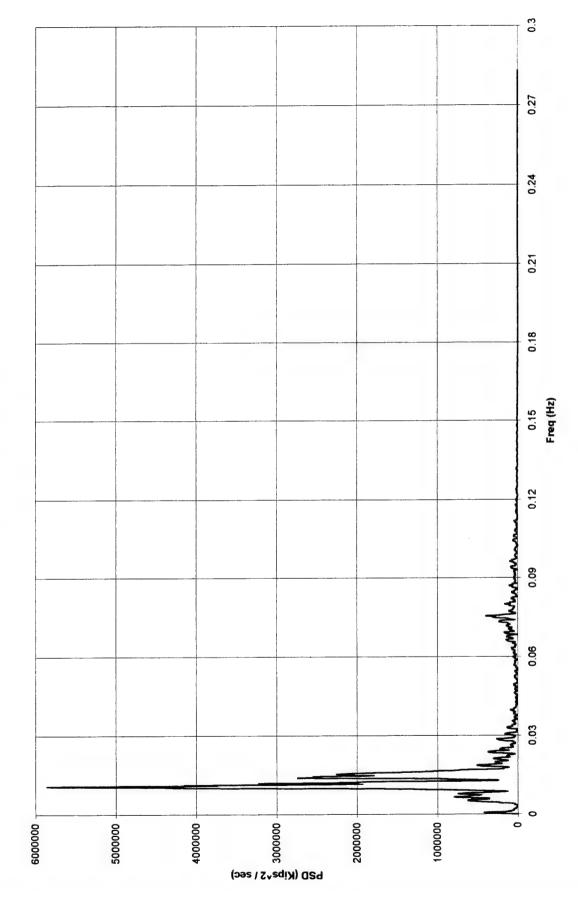
Page 1

Test 123 - BT-1 PSD



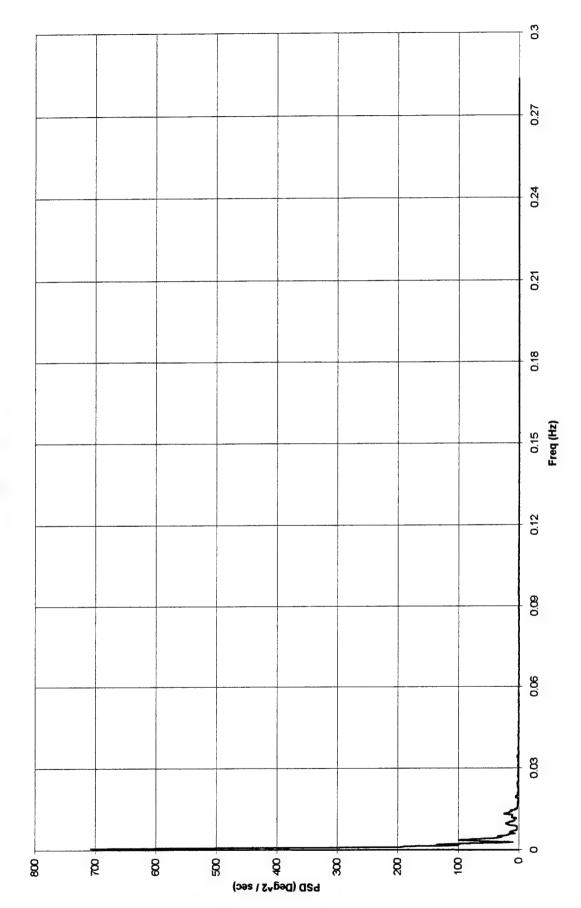
Jace 1

Test 123 - BT-2 PSD



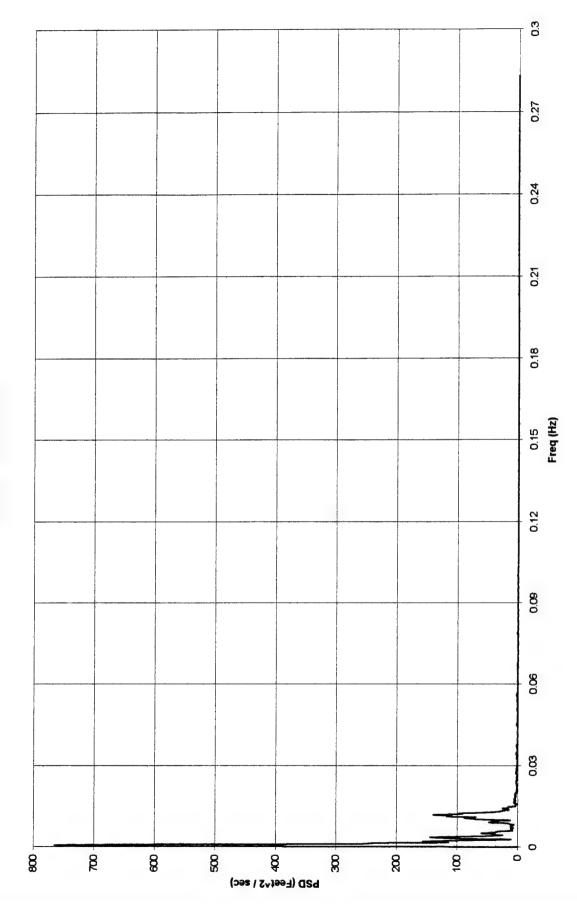
Page 1

Test 221 - PITCH PSD



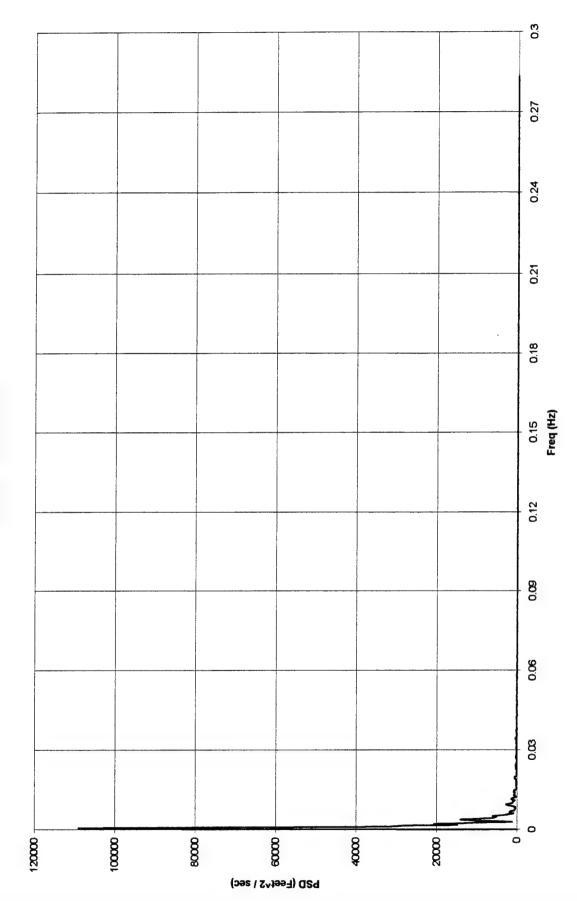
Page 1

Test 221 - HEAVE PSD



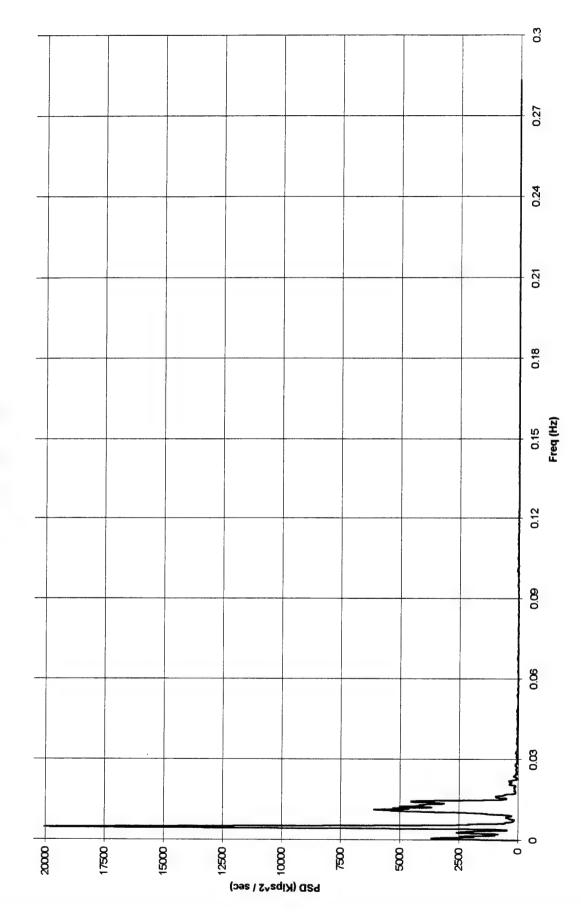
Page 1

Test 221 - SURGE PSD



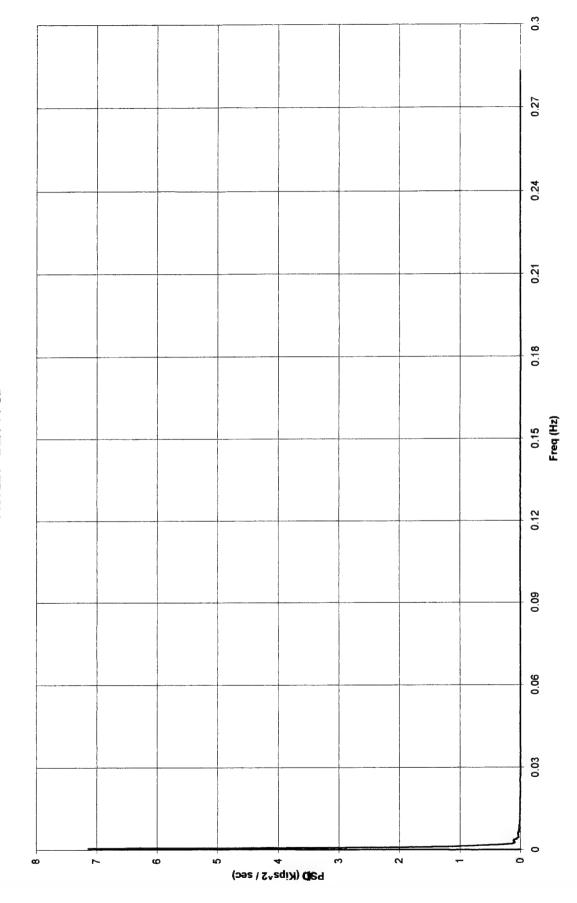
Page 1

Test 221 - ML-1 PSD



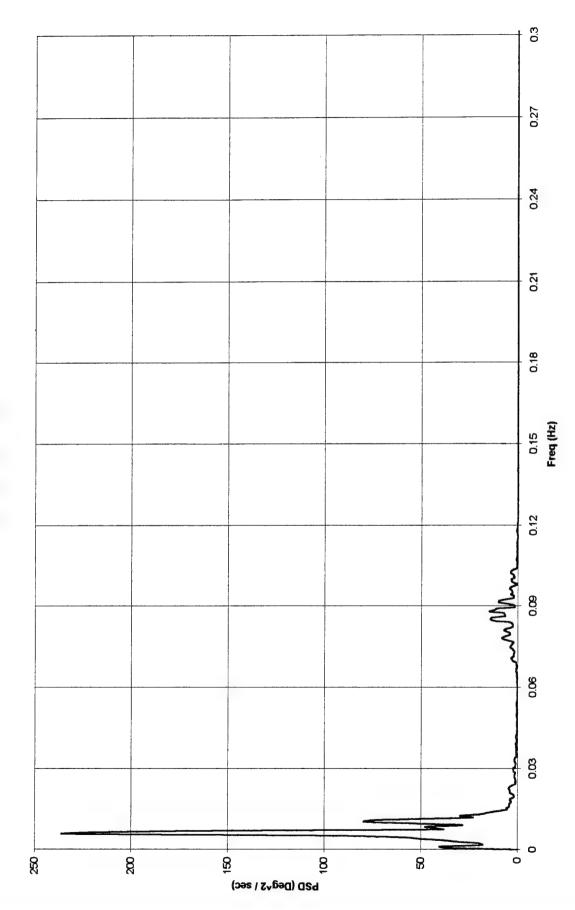
Page 1

Test 221 - BEX-1 PSD

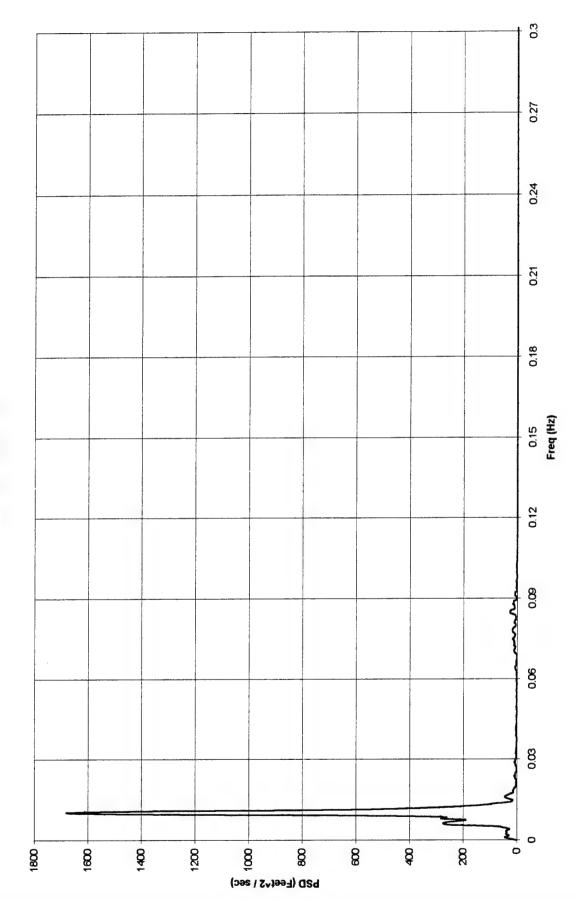


Page 1

Test 222 - PITCH PSD

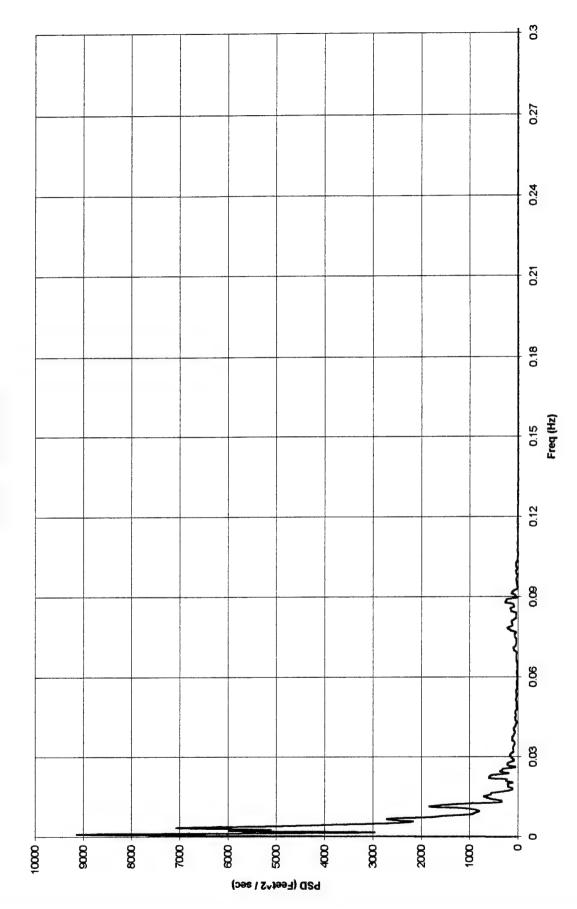


Test 222 - HEAVE PSD

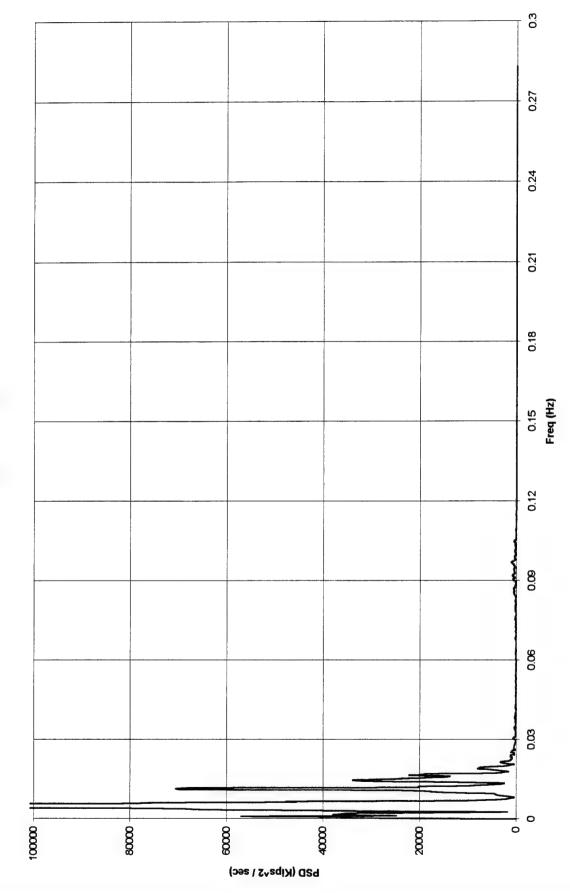


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Test 222 - SURGE PSD

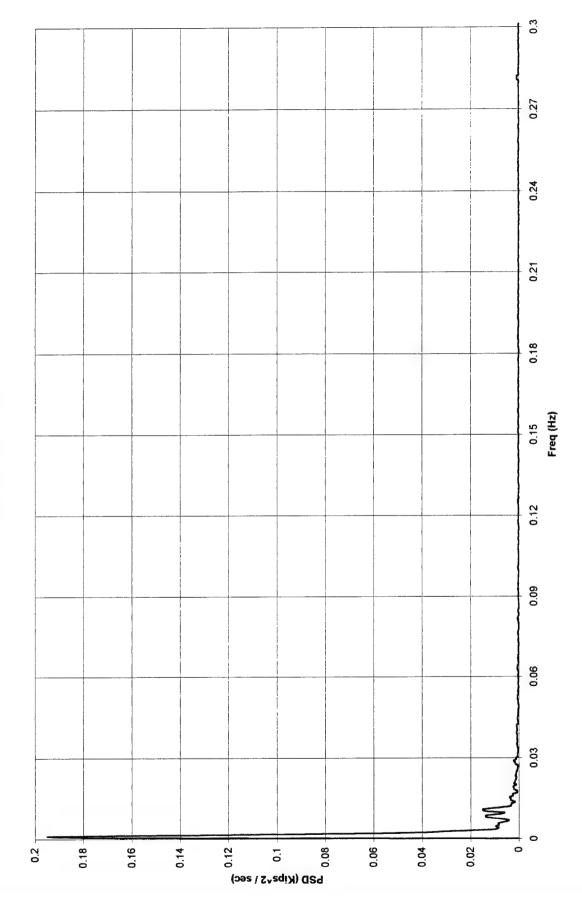


Test 222 - ML-1 PSD

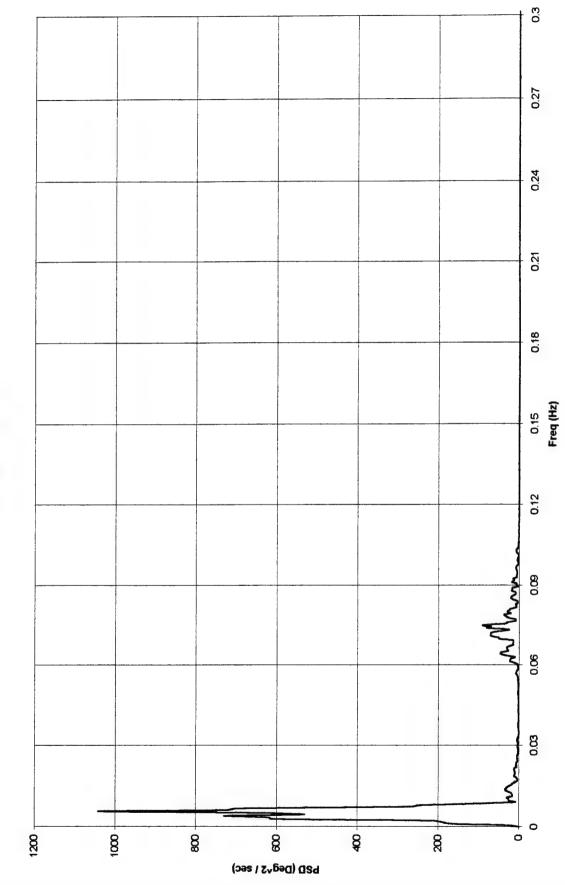


Page 1

Test 222 - BEX-1 PSD

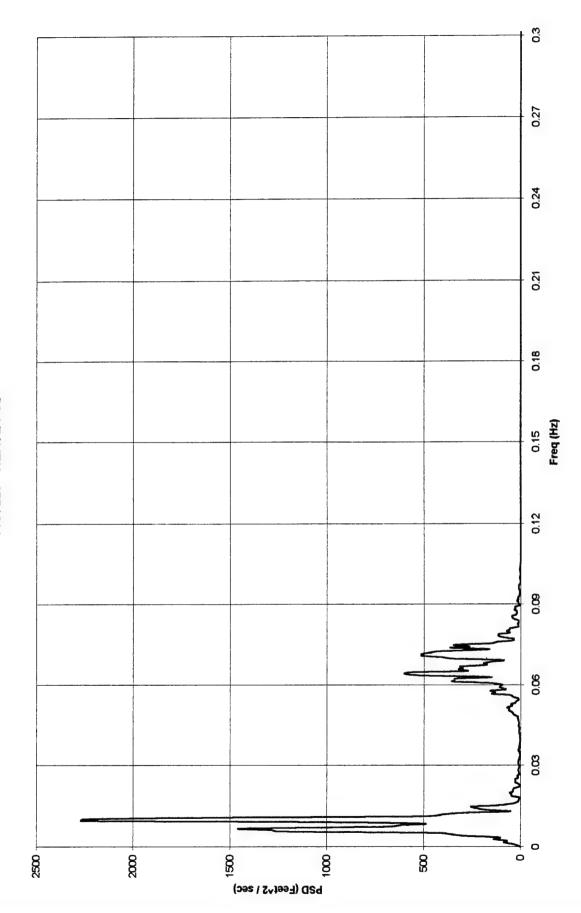


Test 223 - PITCH PSD



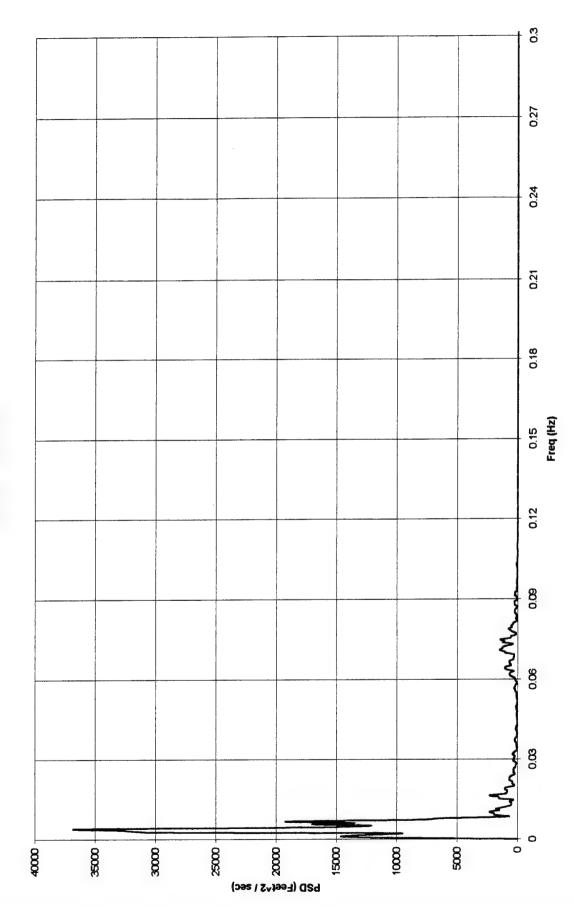
Page 1

Test 223 - HEAVE PSD



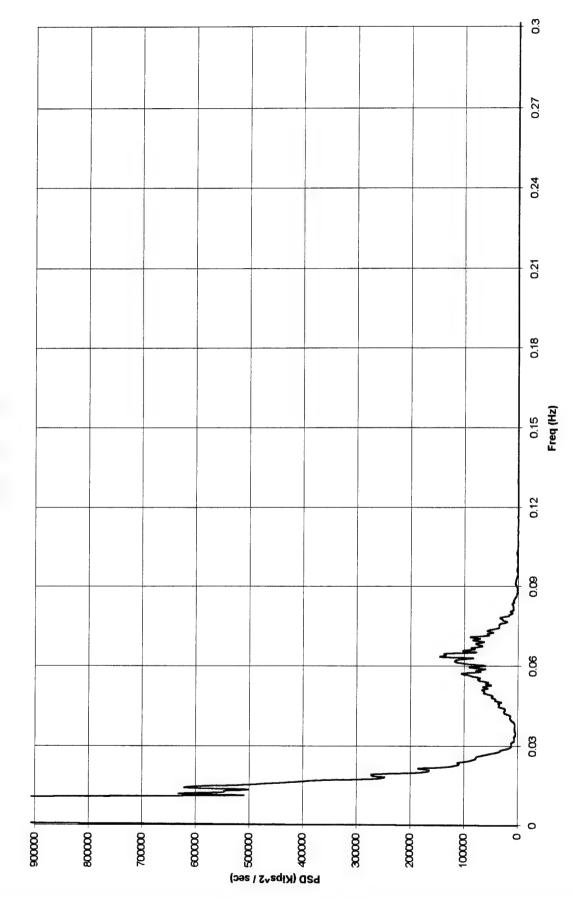
Page 1

Test 223 - SURGE PSD

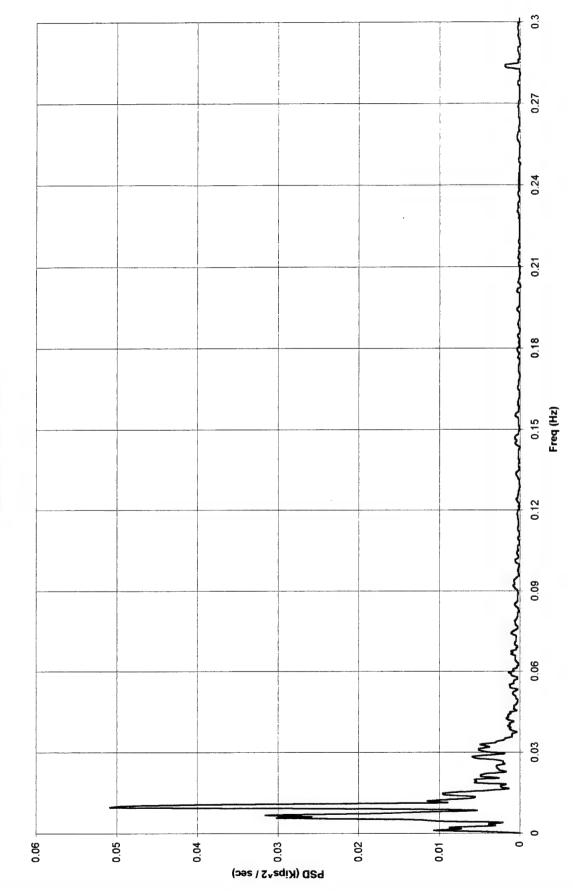


Dage 1

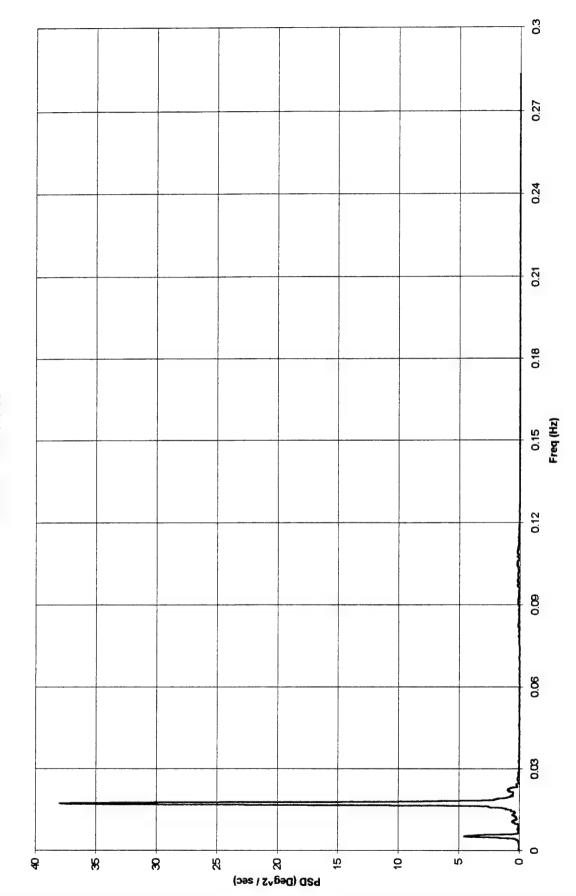
Test 223 - ML-1 PSD



Test 223 - BEX-1 PSD

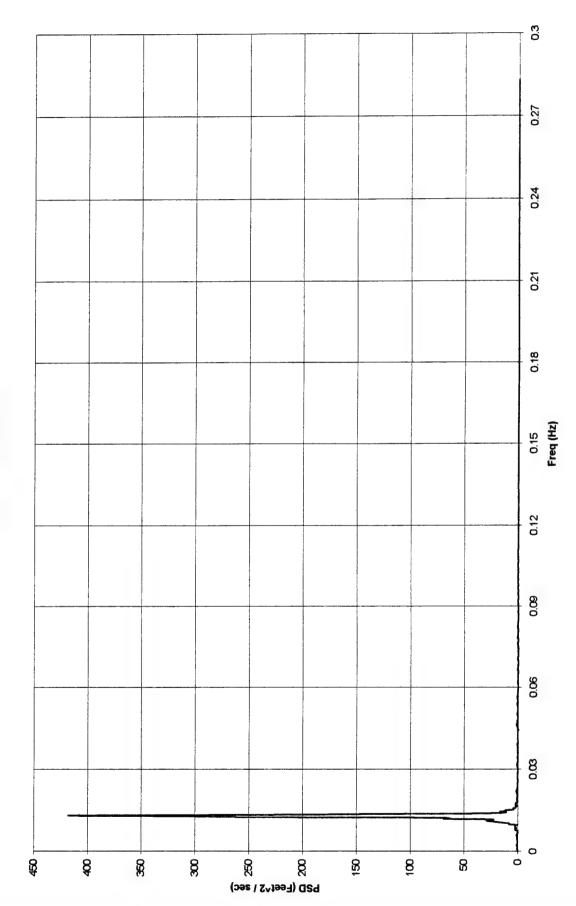


Test 321 - PITCH PSD



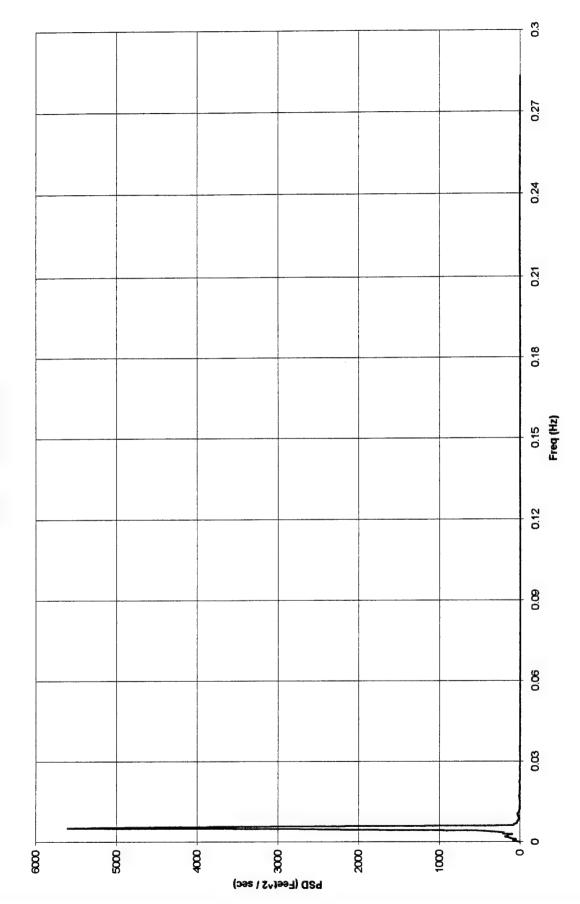
Dane 1

Test 321 - HEAVE PSD



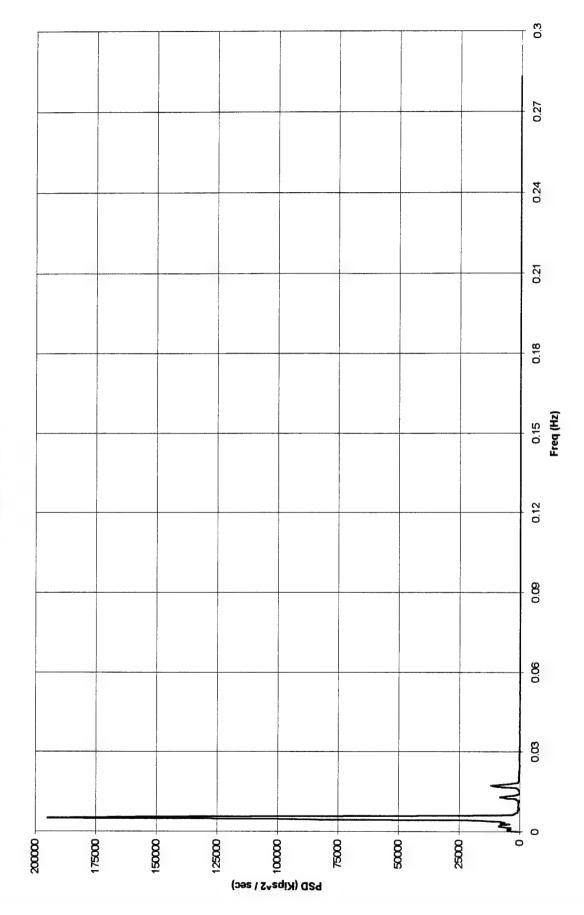
Page 1

Test 321 - SURGE PSD



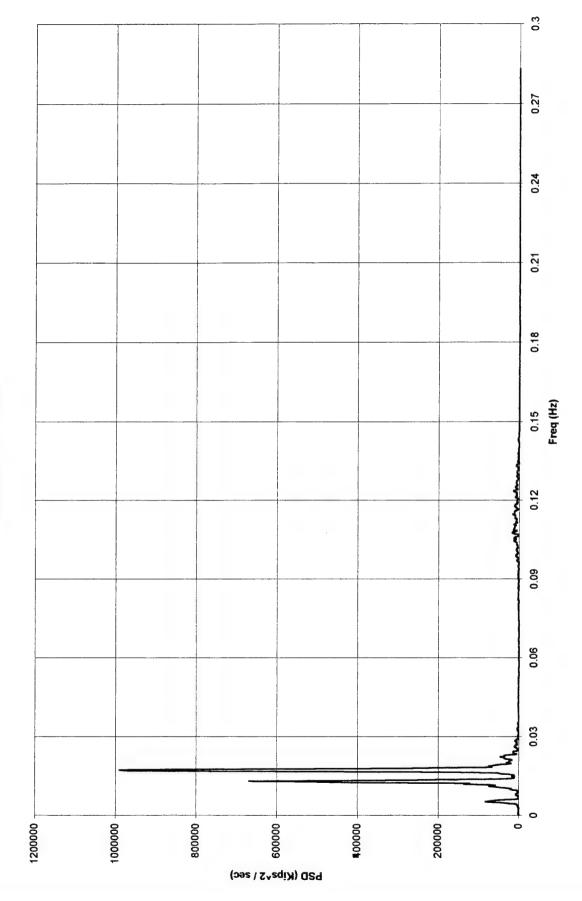
Page 1

Test 321 - ML-1 PSD

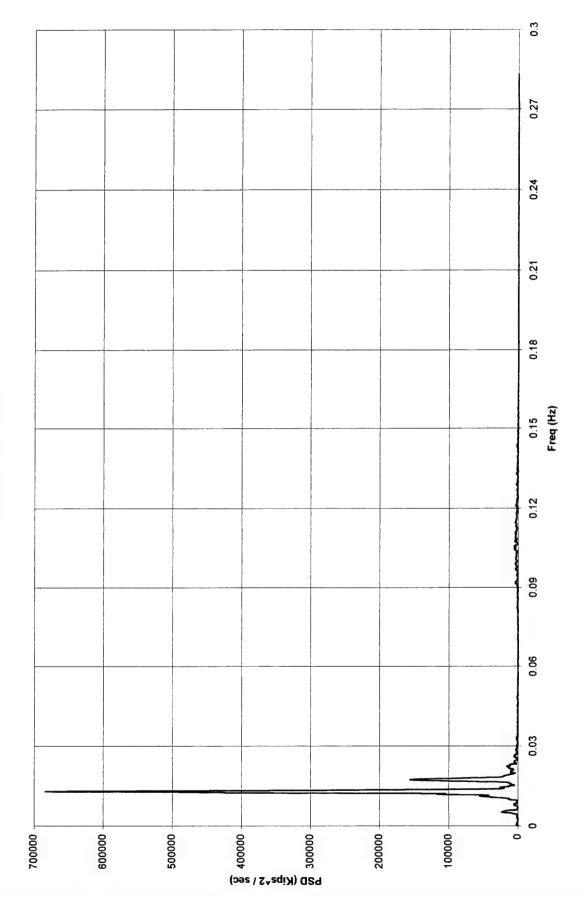


Page 1

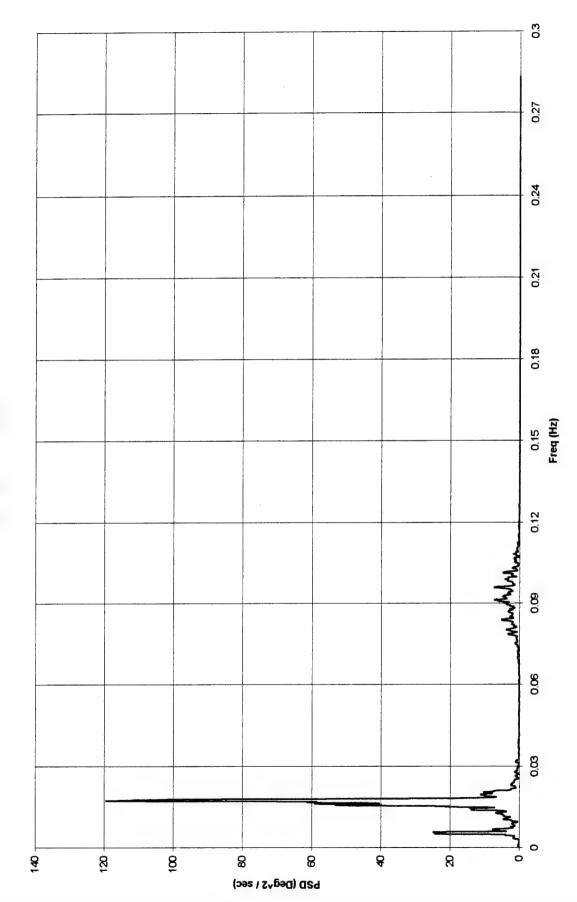
Test 321 - BT-1 PSD



Test 321 - BT-2 PSD

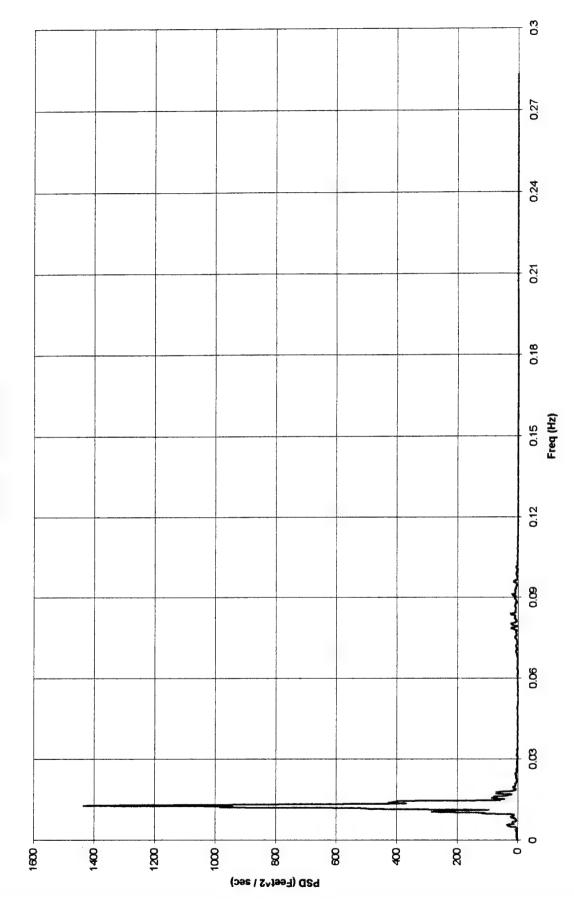


Test 322 - PITCH PSD



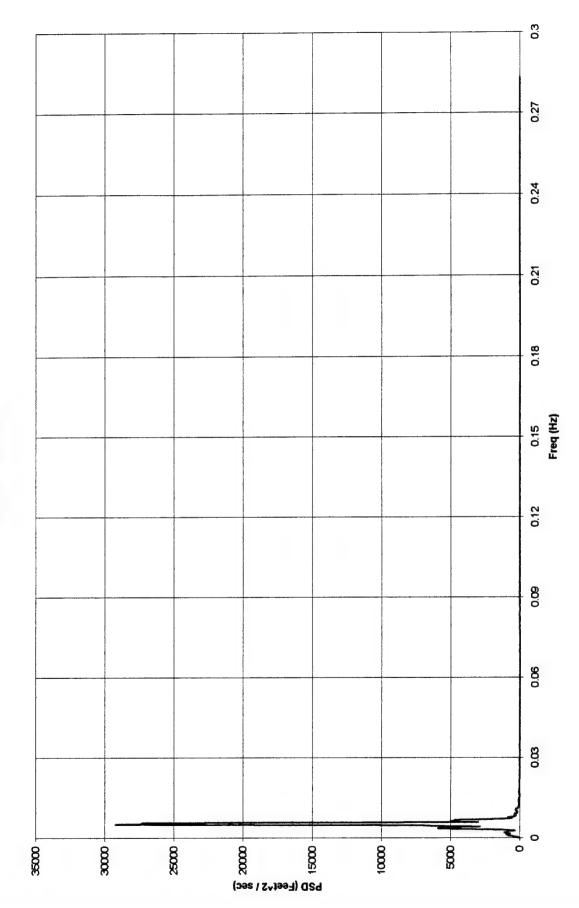
Page 1

Test 322 - HEAVE PSD



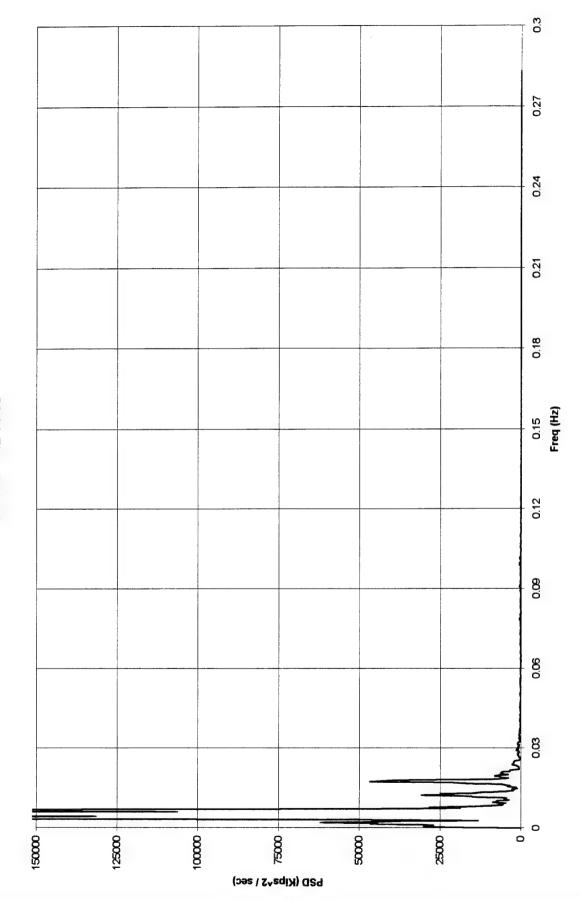
Page 1

Test 322 - SURGE PSD



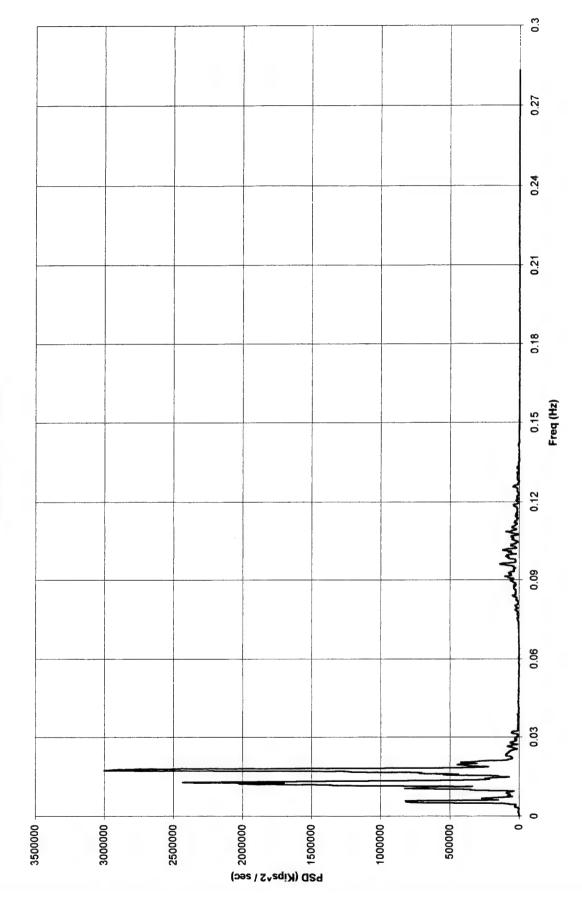
Page 1

Test 322 - ML-1 PSD



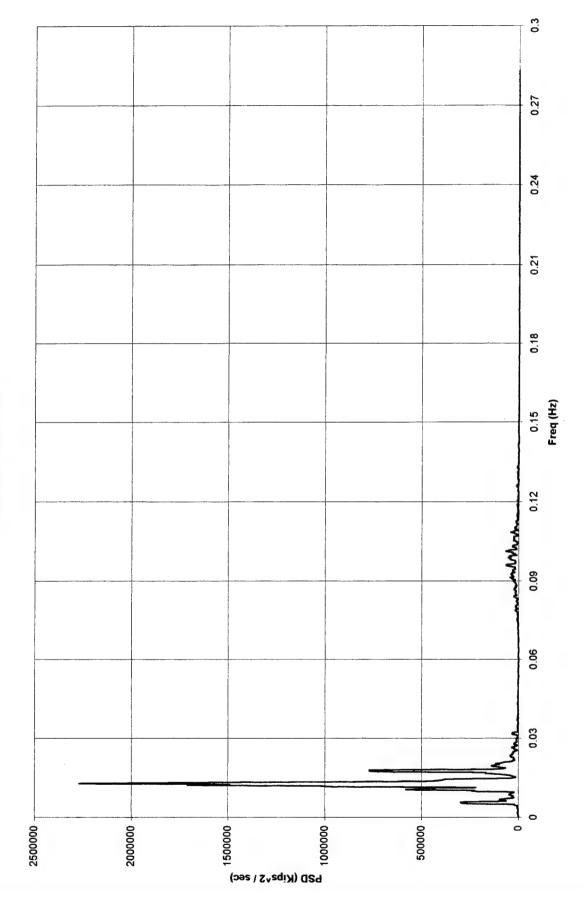
Page 1

Test 322 - BT-1 PSD



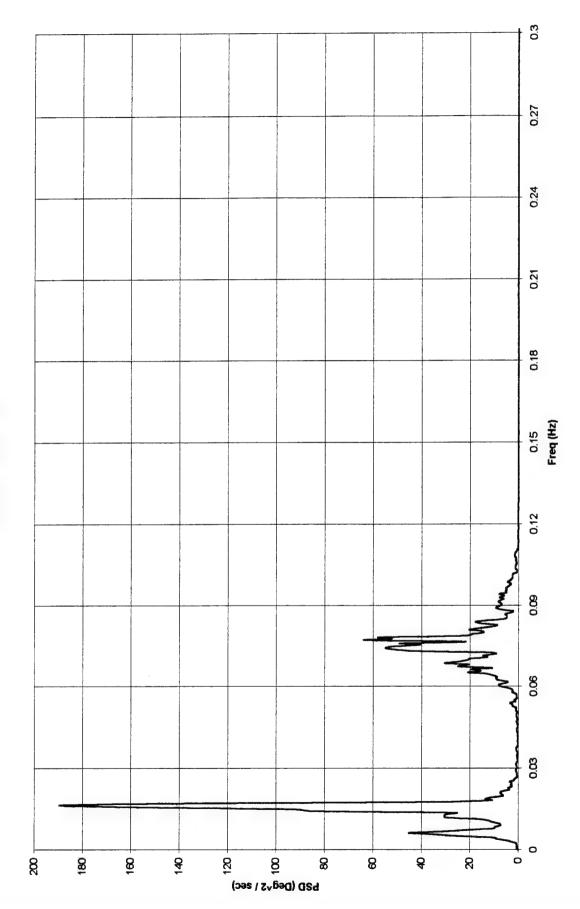
Page 1

Test 322 - BT-2 PSD



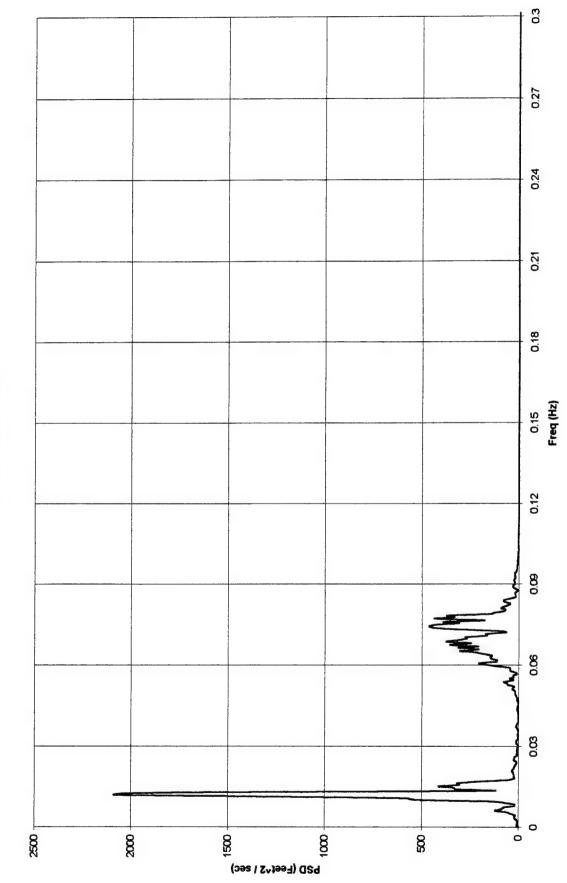
Jane 1

Test 323 - PITCH PSD



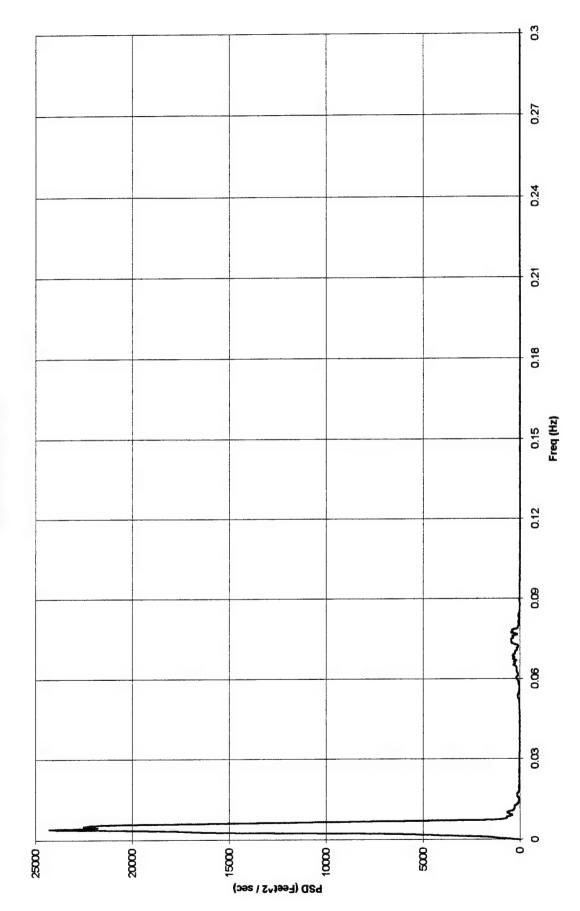
Page 1

Test 323- HEAVE PSD



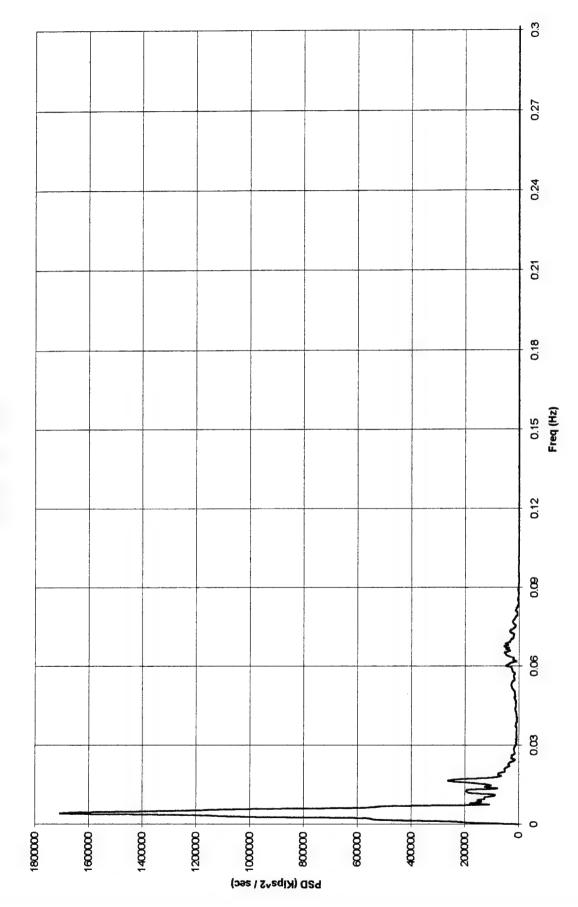
Dane 1

Test 323 - SURGE PSD



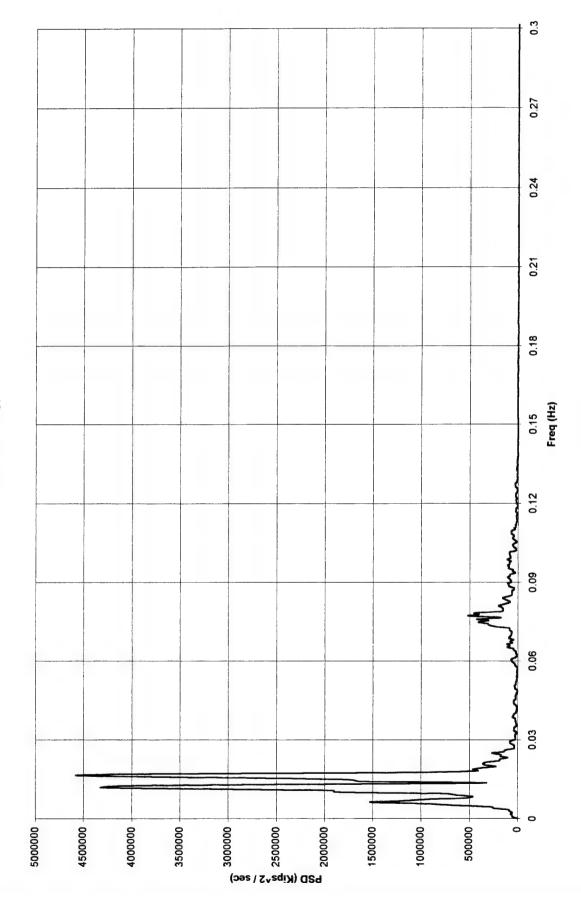
Page 1

Test 323 - ML-1 PSD



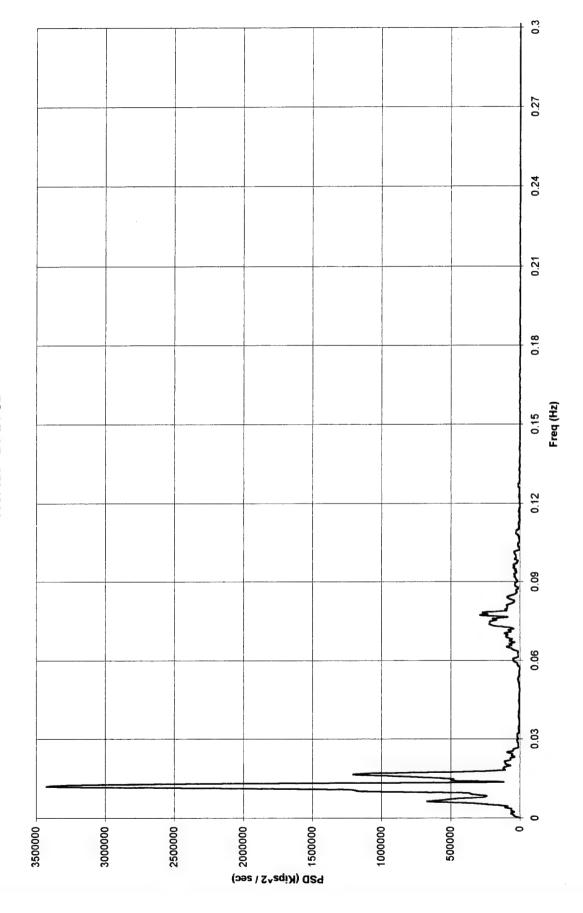
Page 1

Test 323 - BT-1 PSD

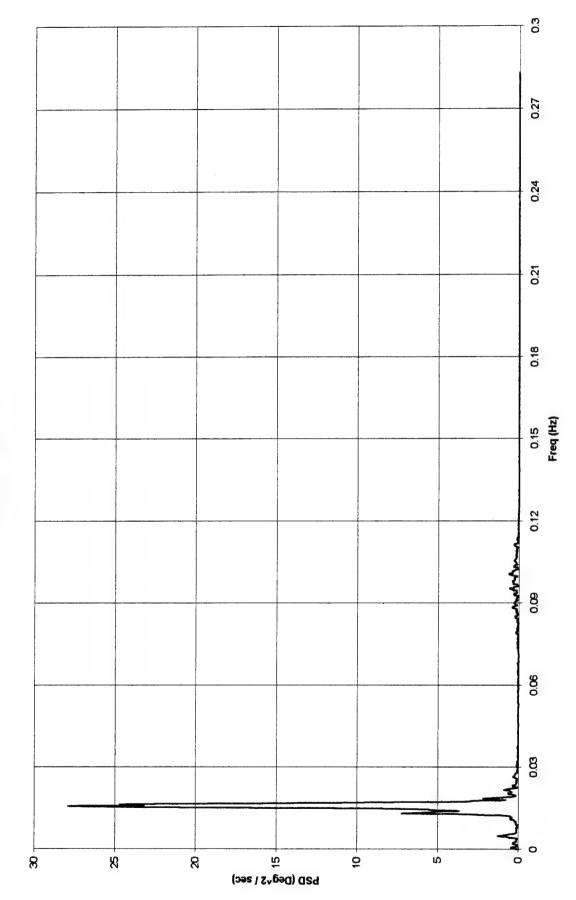


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Test 323 - BT-2 PSD

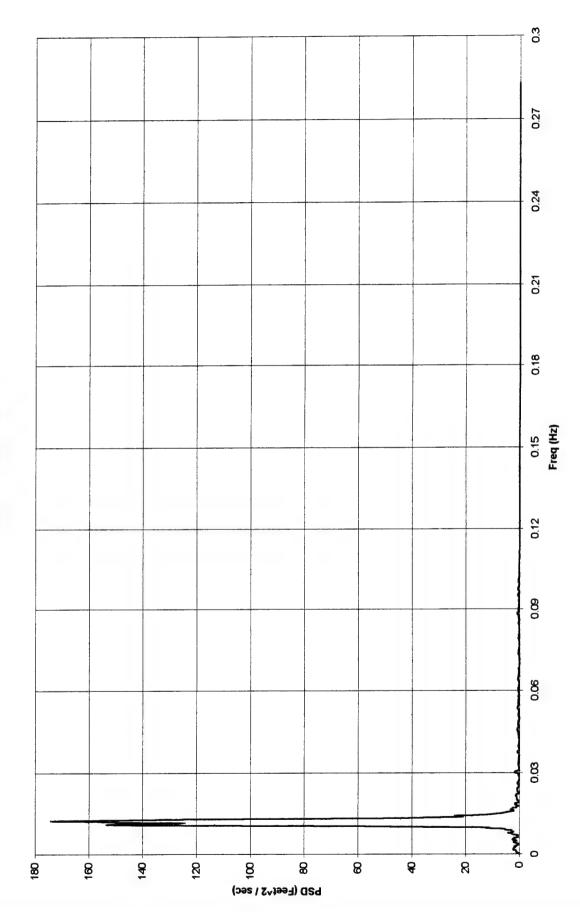


Test 361- PITCH PSD



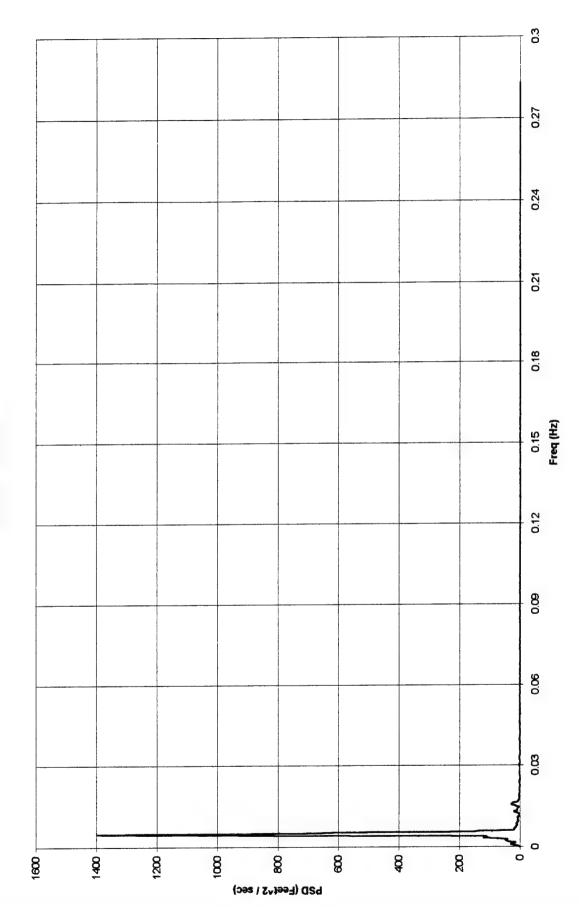
Page 1

Test 361 - HEAVE PSD



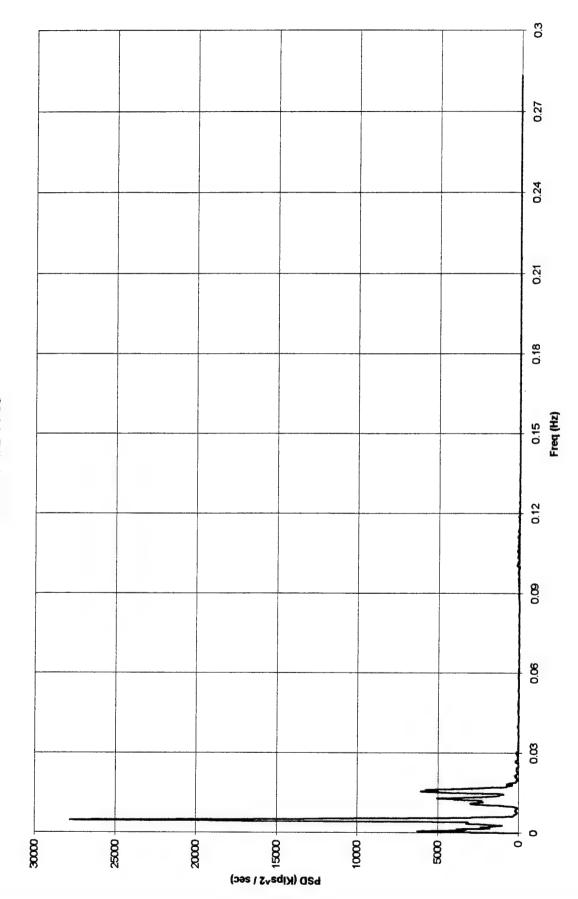
Page 1

Test 361 - SURGE PSD



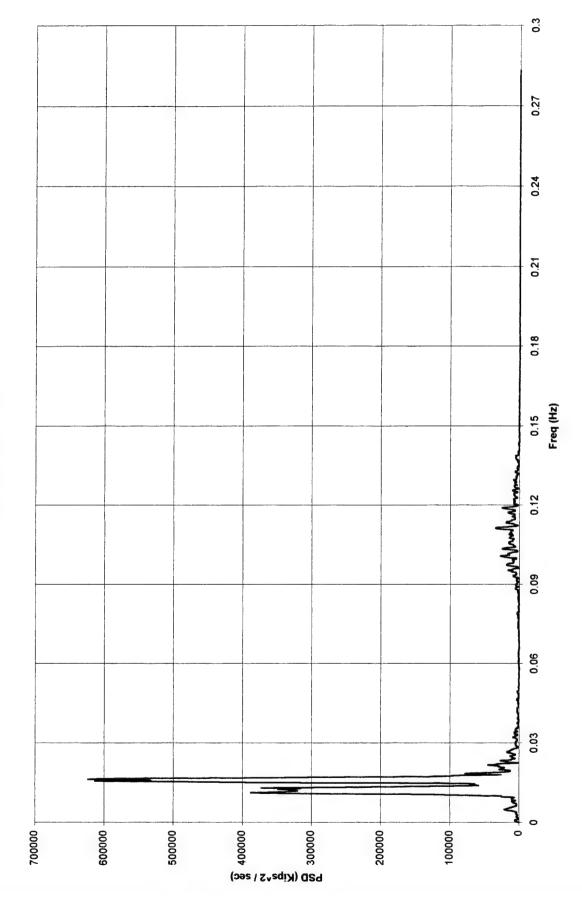
Page 1

Test 361 - ML-1 PSD

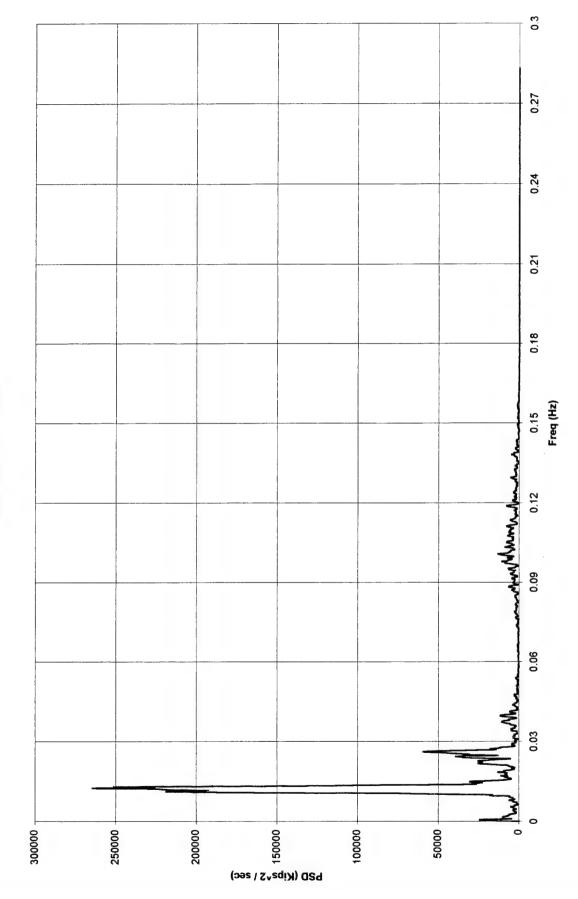


Page 1

Test 361 - BT-1 PSD

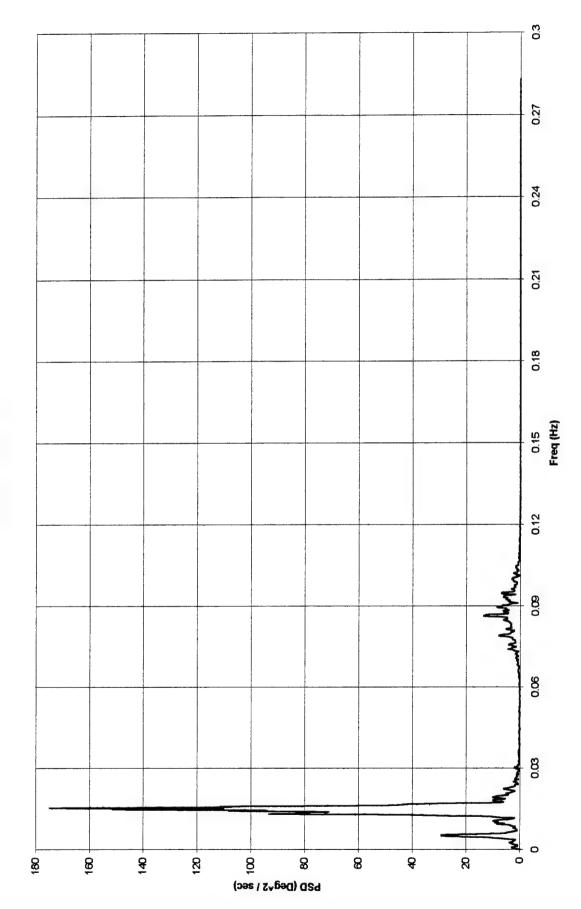


Test 361 - BT-2 PSD

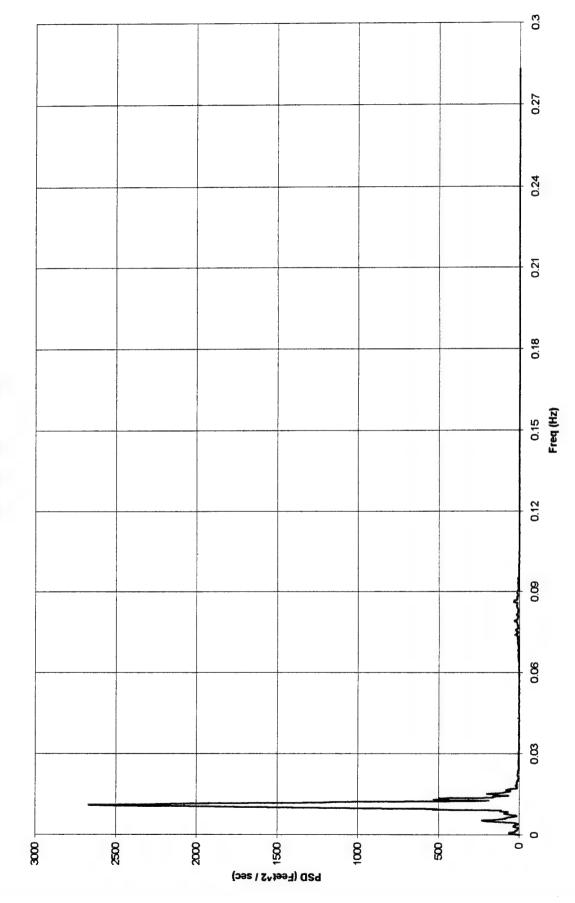


Page 1

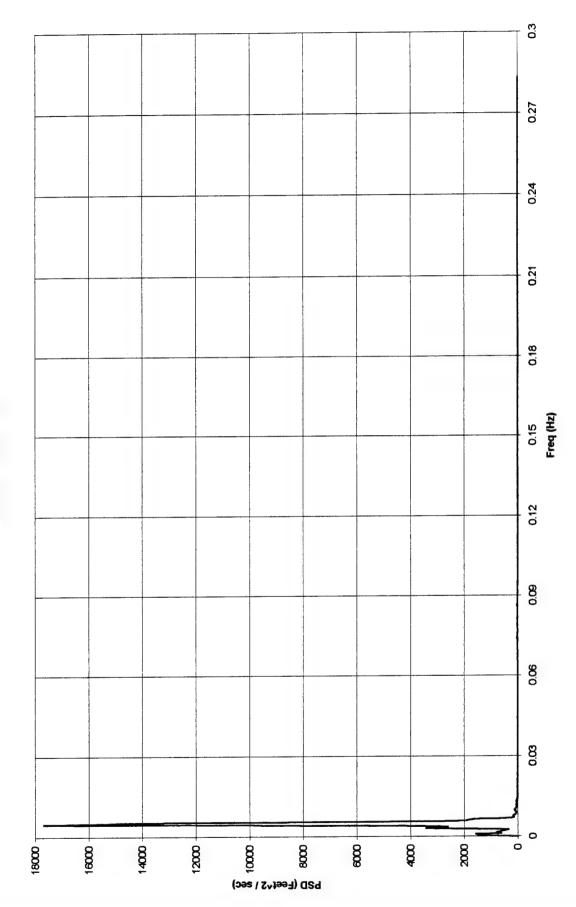
Test 362 - PITCH PSD



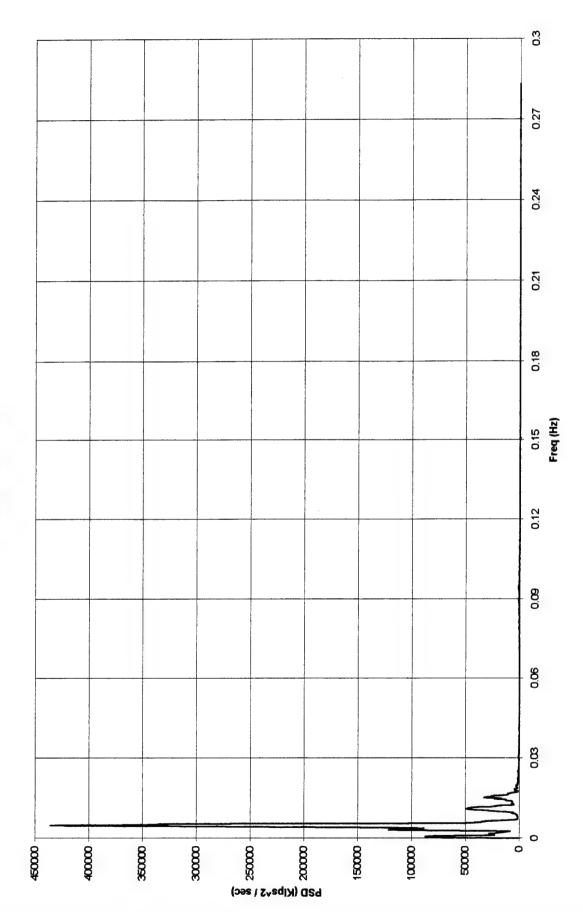
Test 362 - HEAVE PSD



Test 362 - SURGE PSD

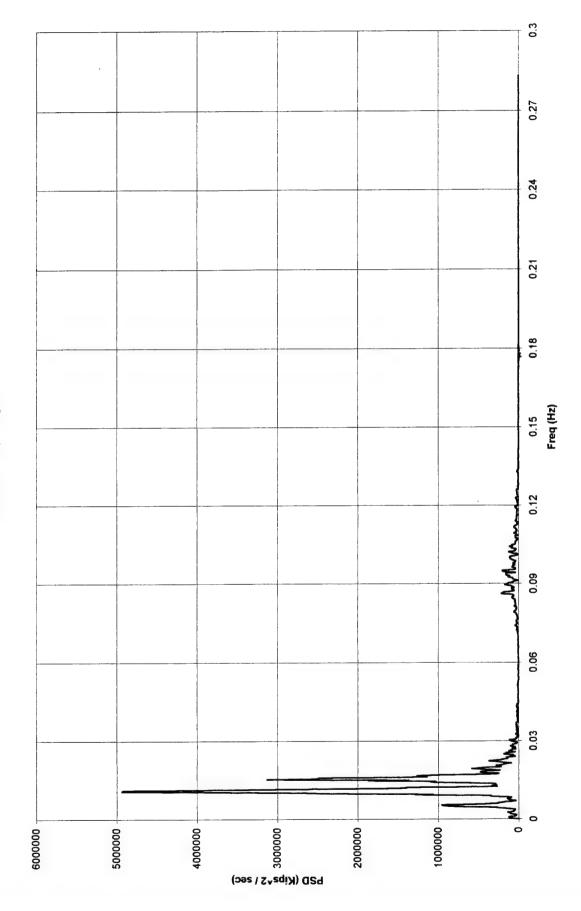


Test 362 - ML-1 PSD



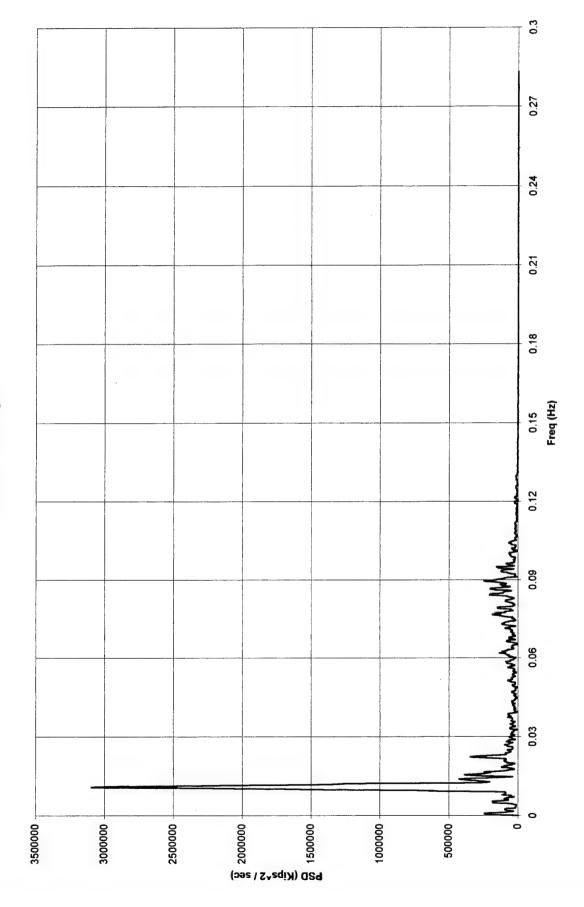
Page 1

Test 362 - BT-1 PSD



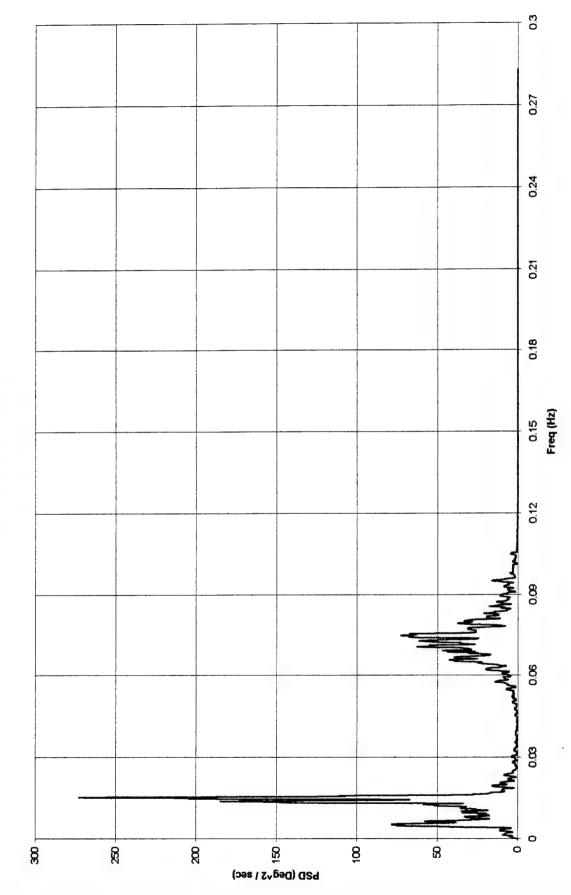
Page 1

Test 362 - BT-2 PSD

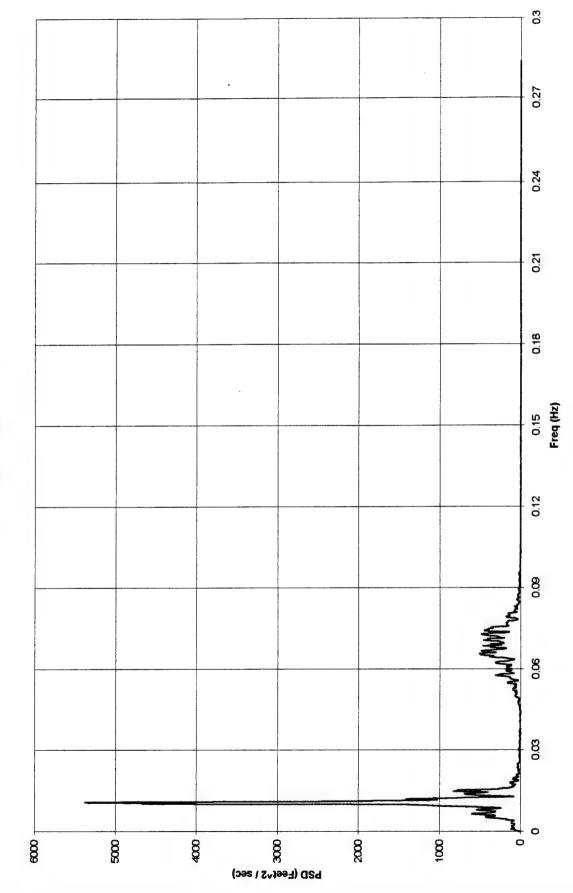


Page 1

Test 363 - PITCH PSD

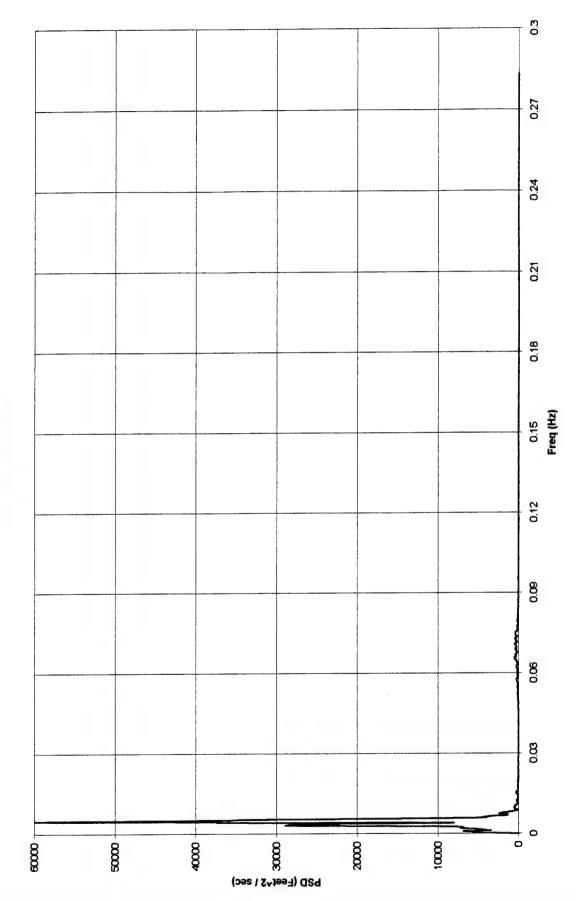


Test 363 - HEAVE PSD



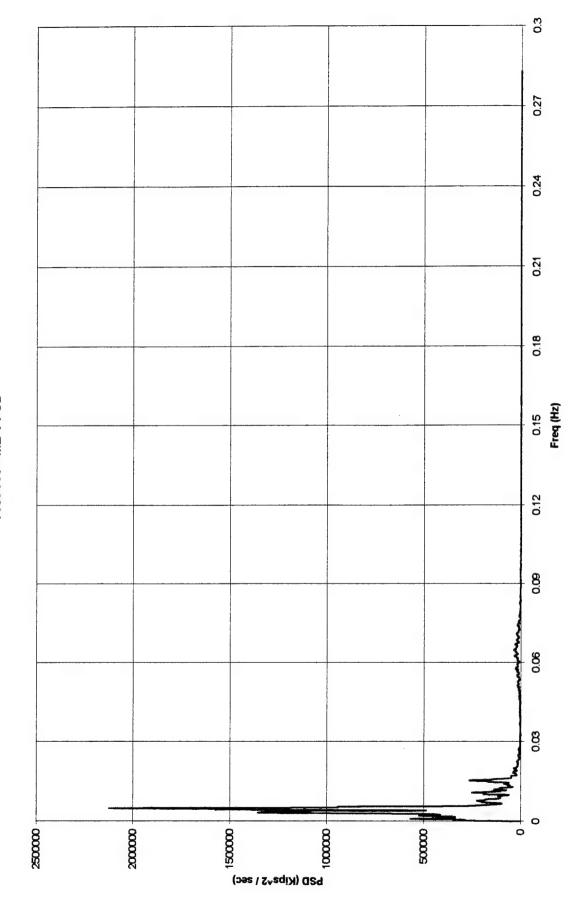
Page 1

Test 363 - SURGE PSD

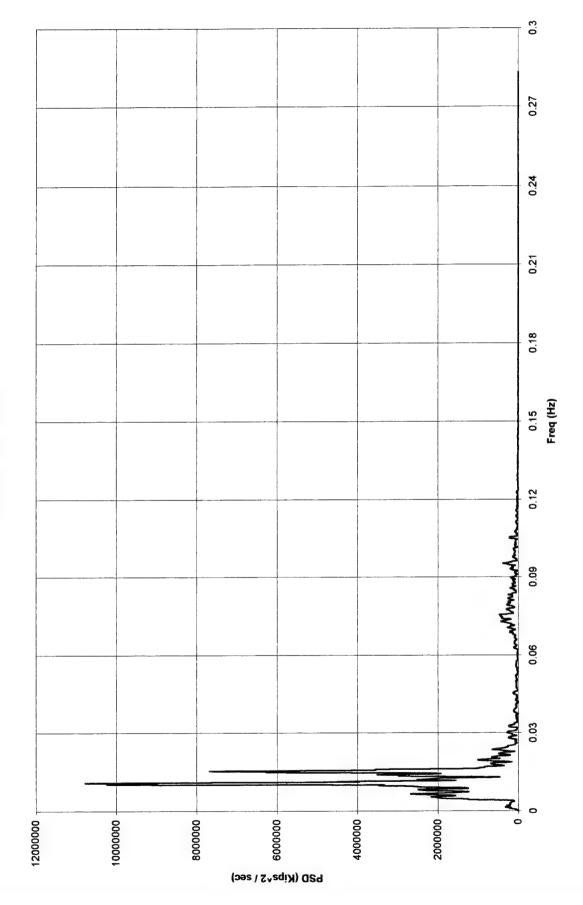


Page 1

Test 363 - ML-1 PSD

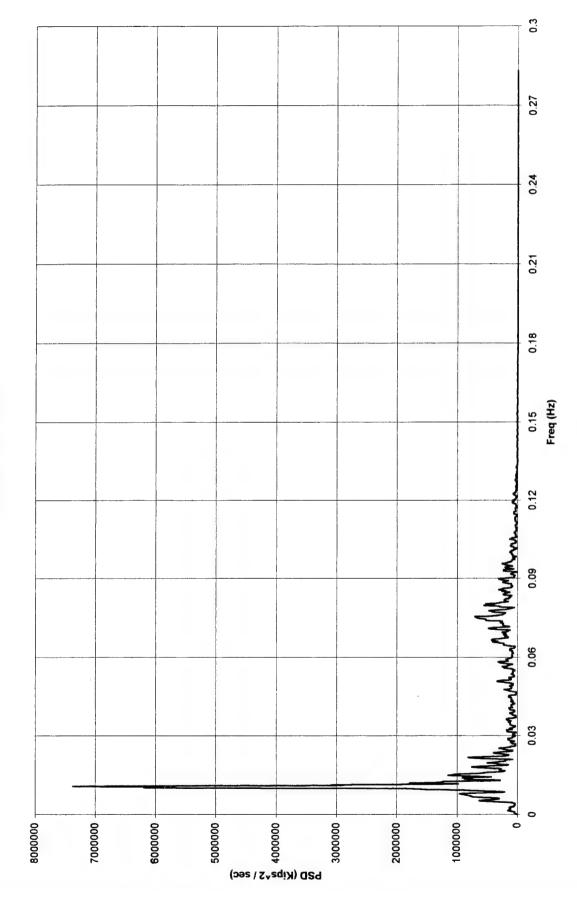


Test 363 - BT-1 PSD



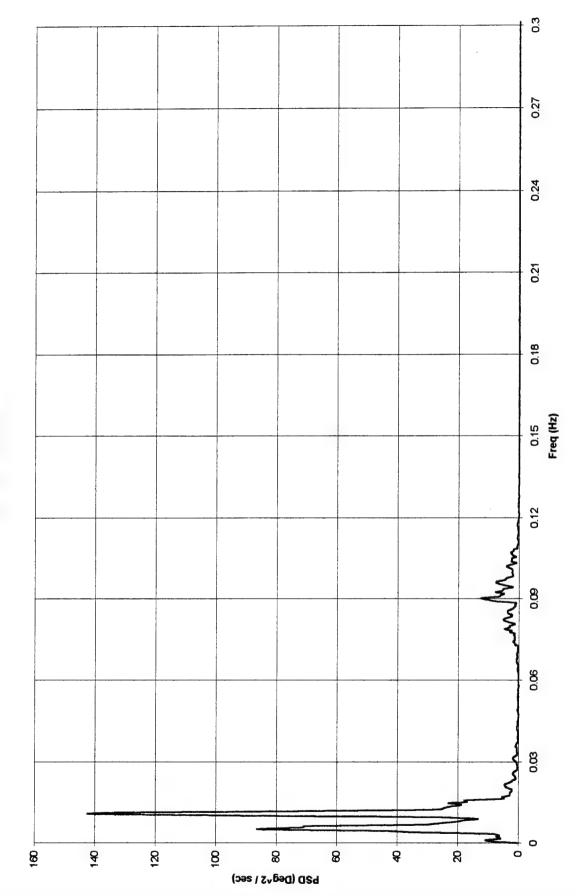
Jane 1

Test 363 - BT-2 PSD



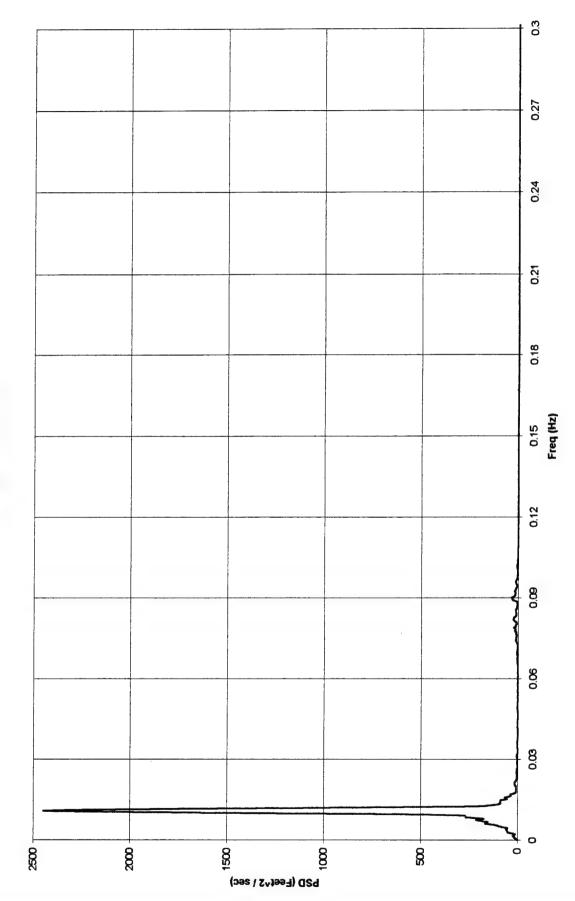
Page 1

Test 422 - PITCH PSD



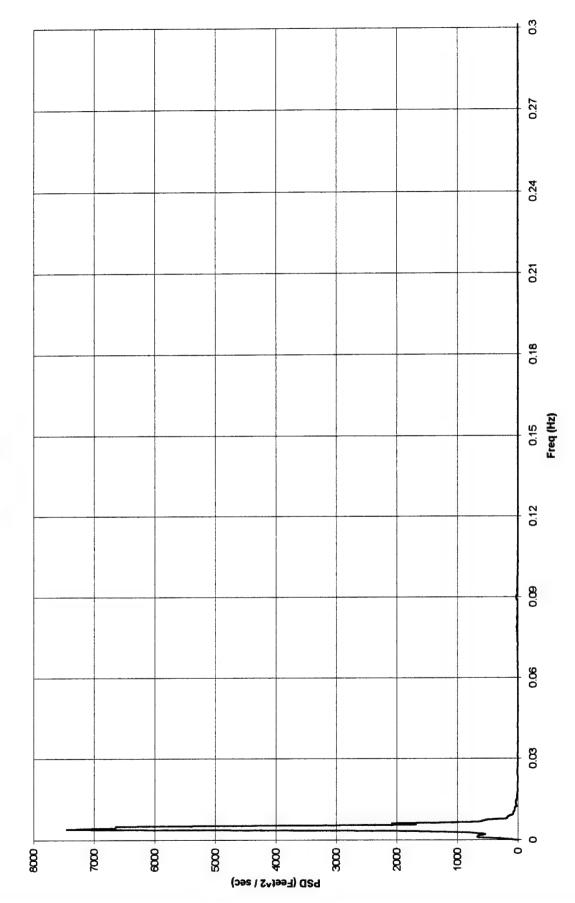
Page 1

Test 422 - HEAVE PSD



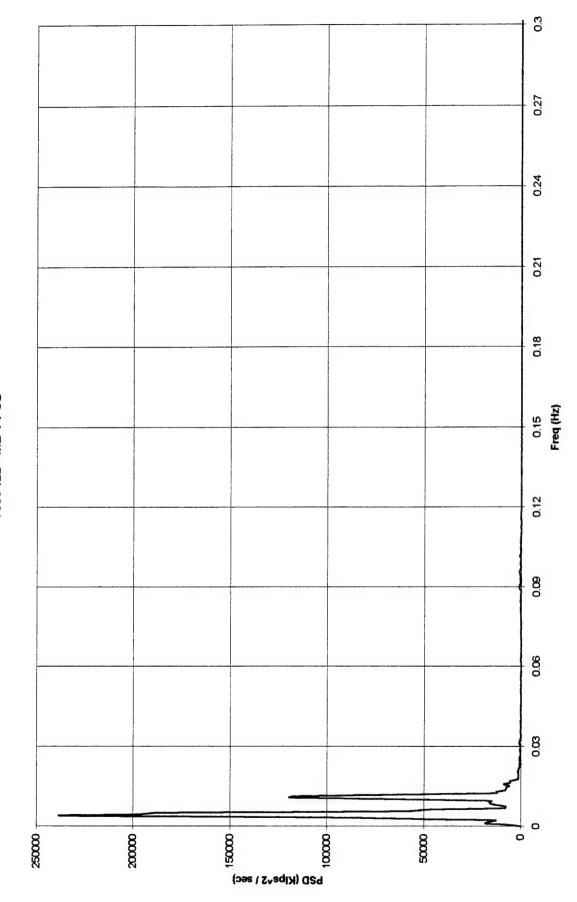
Days 1

Test 422 - SURGE PSD

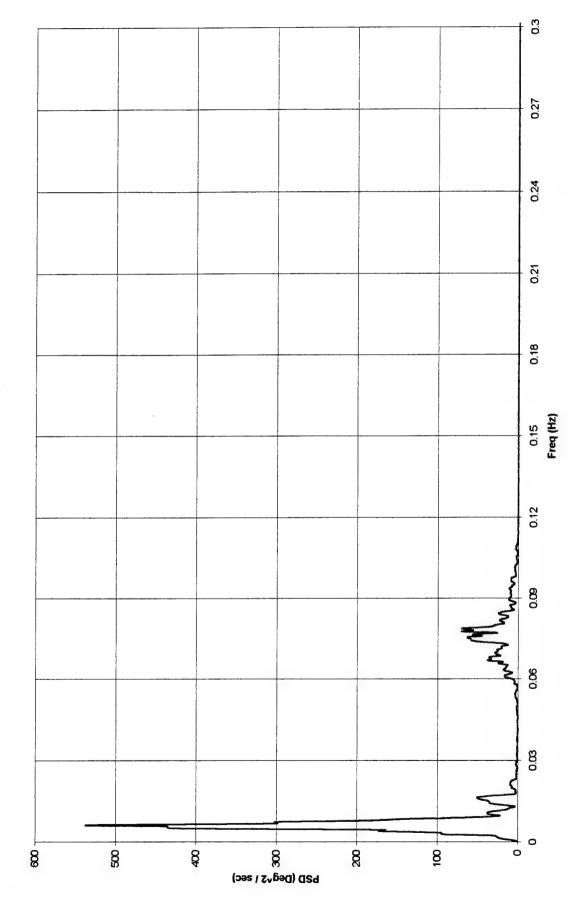


Page 1

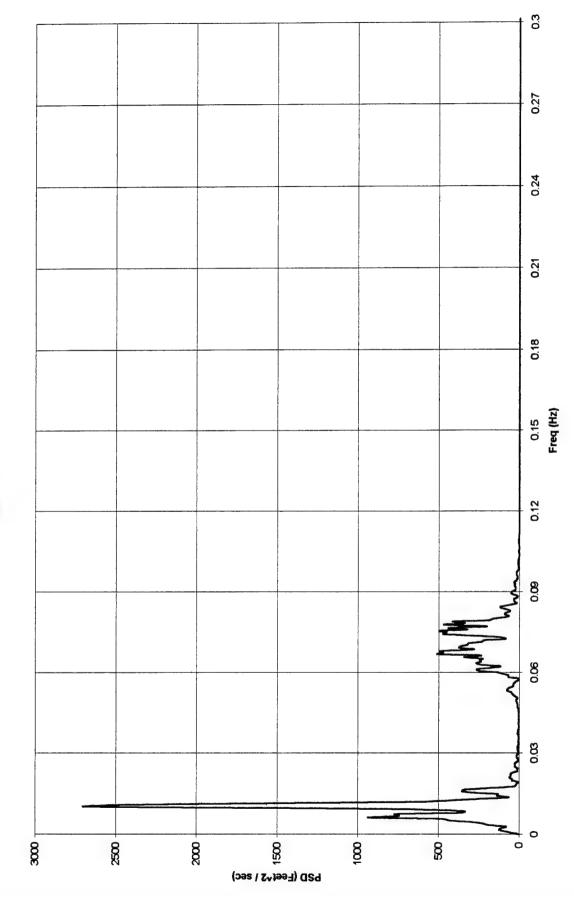
Test 422 - ML-1 PSD



Test 423 - PITCH PSD

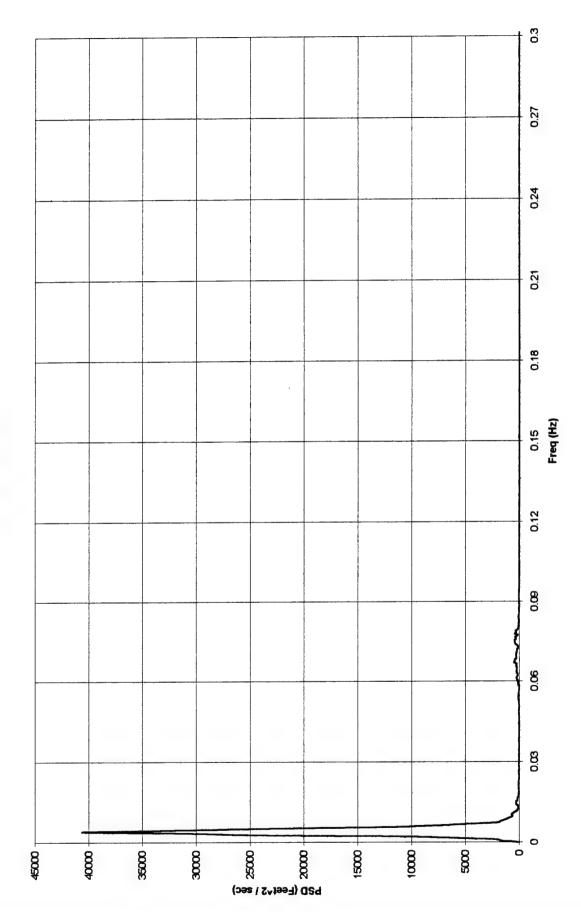


Test 423 - HEAVE PSD



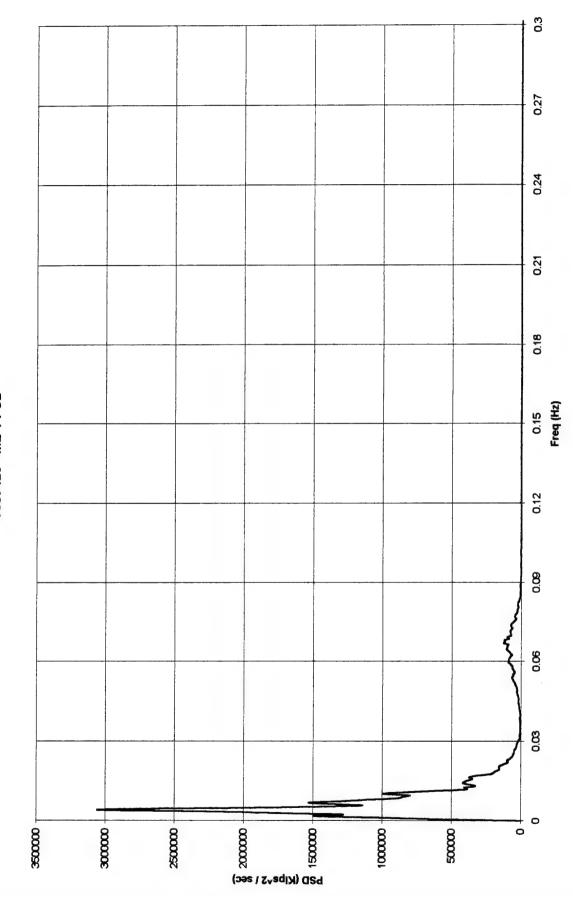
Page 1

Test 423 - SURGE PSD



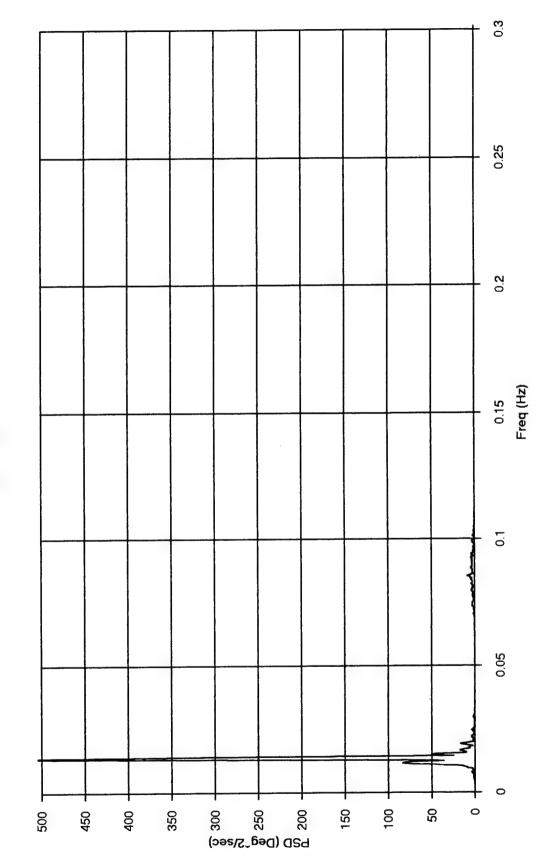
Page 1

Test 423 - ML-1 PSD

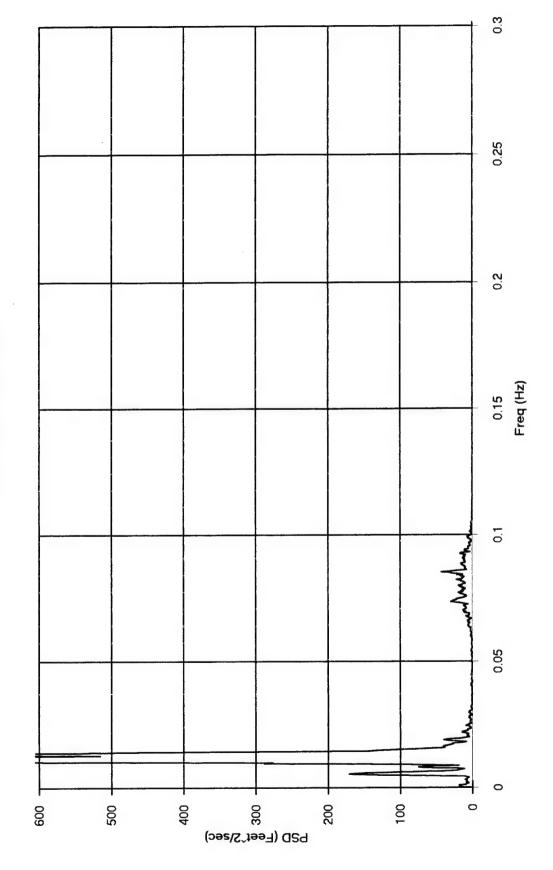


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Test A556B · PITCH PSD



Test A556B · HEAVE PSD

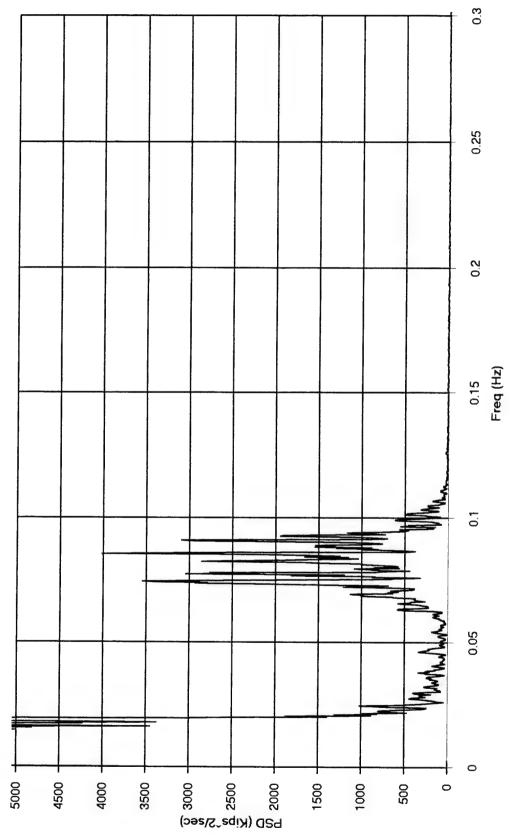


Page 1

0.25 0.2 Test A5568 - SURGE PSD 0.15 Freq (Hz) 0.1 0.05 200 # 0 PSD (Feet^2/sec) 20 450 400 100 0 350 150

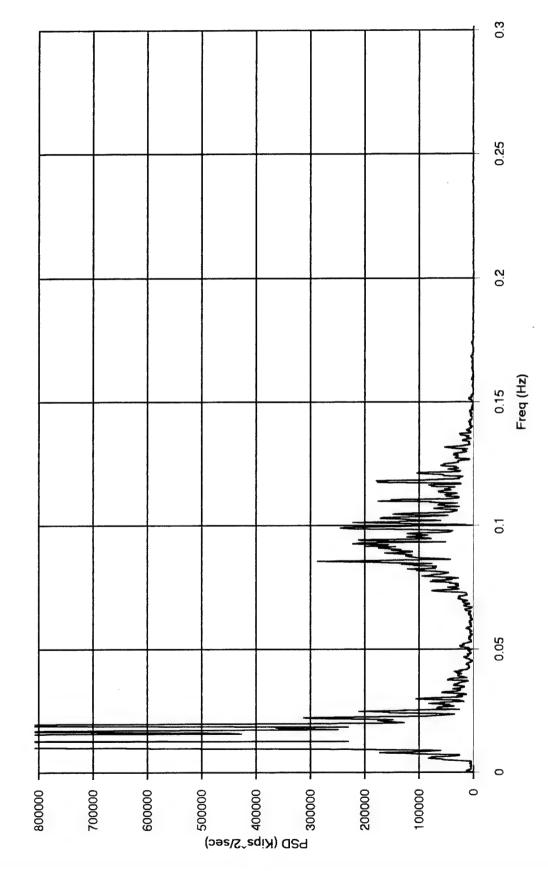
Page 1

0.3



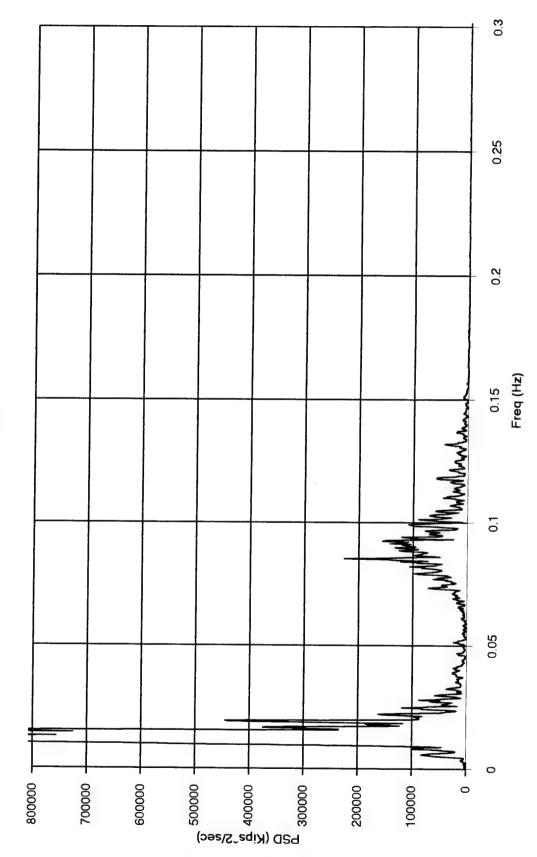
Page

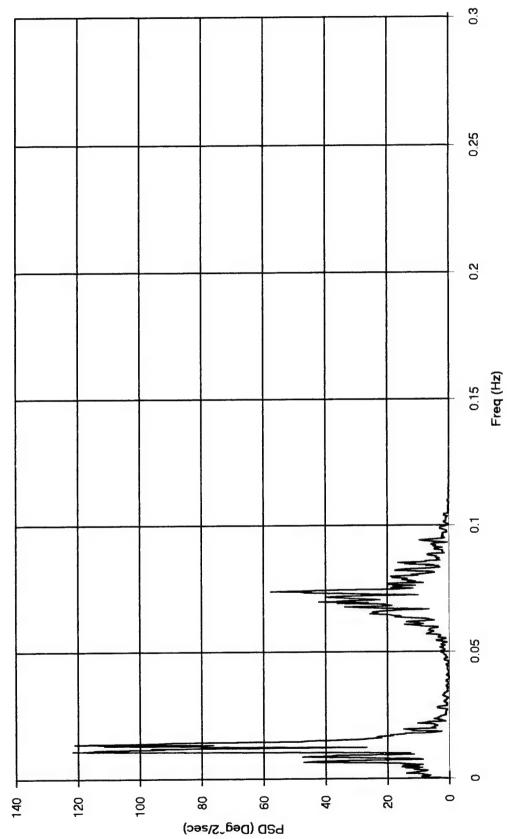
Test A556B - BT-1 PSD



Page 1

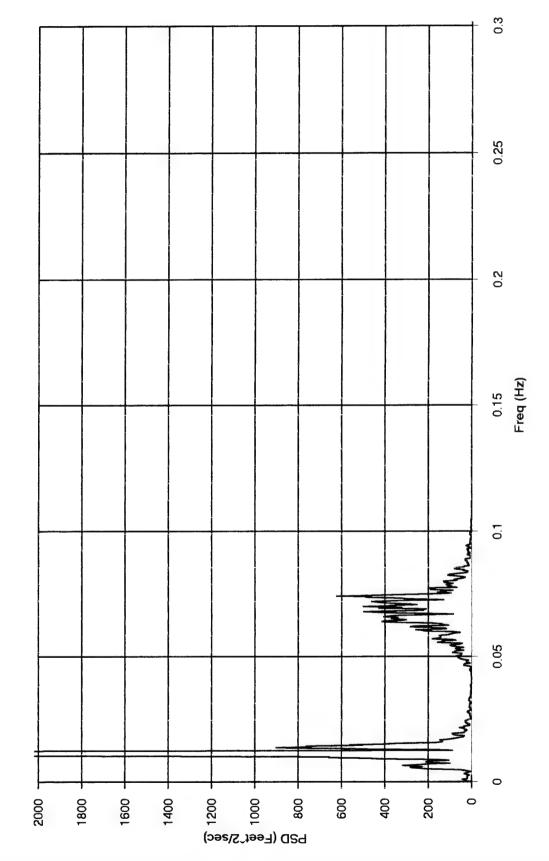






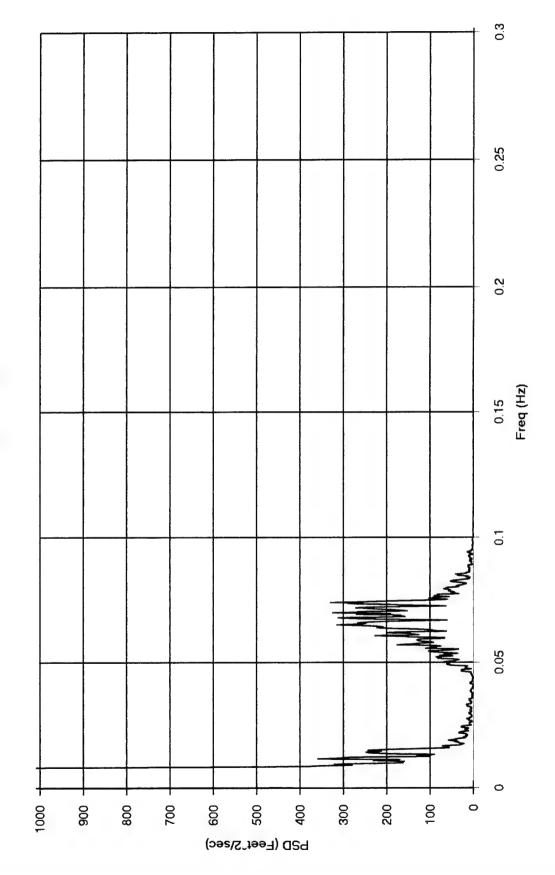
Page 1

Test A557 - HEAVE PSD



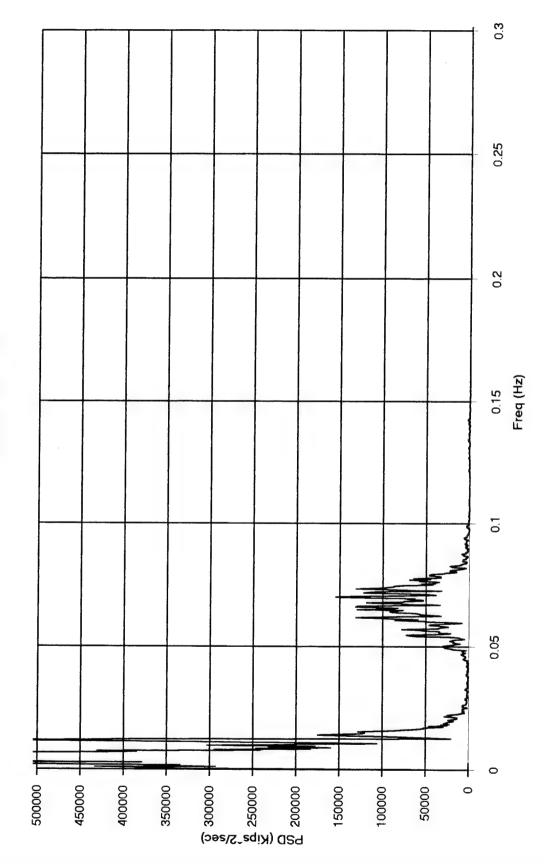
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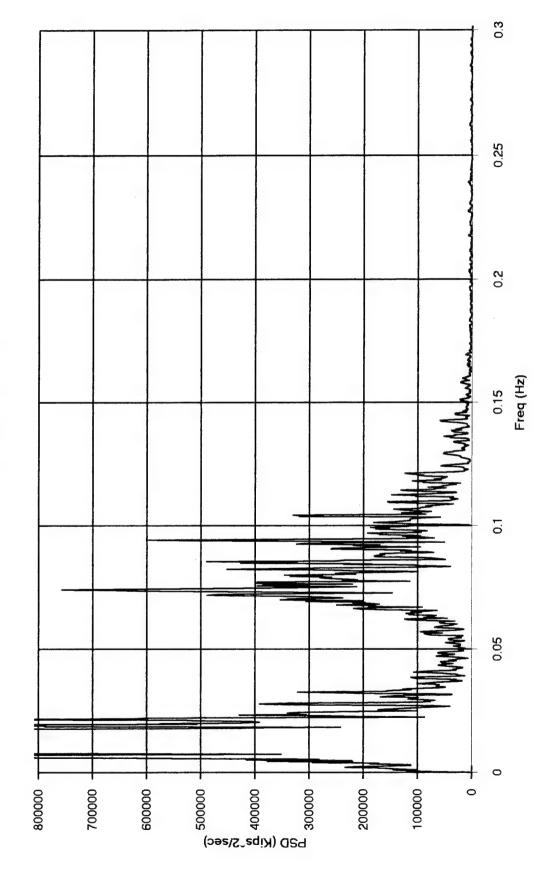
Test A557 - SURGE PSD



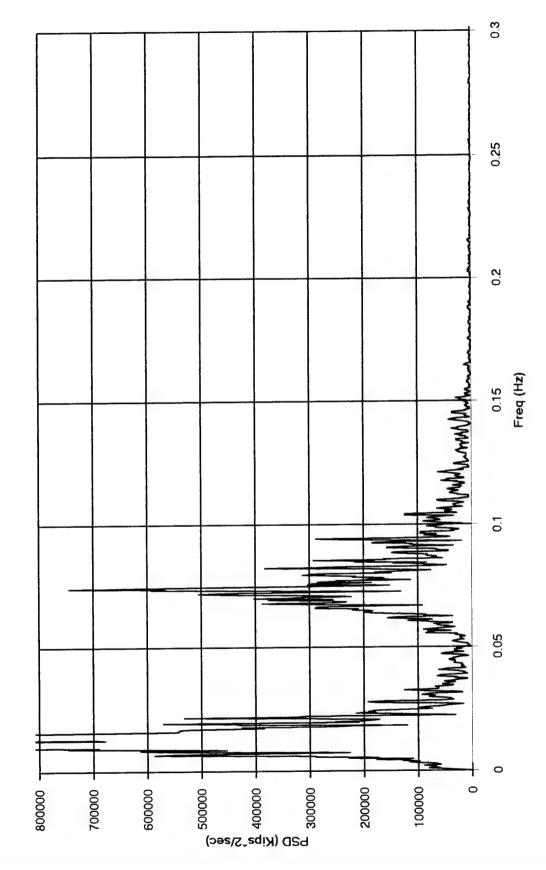
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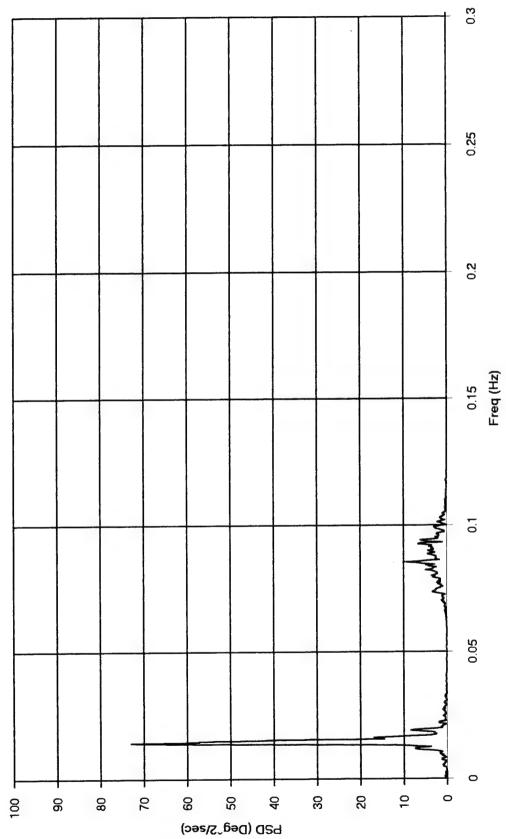
Test A557 - ML-1 PSD





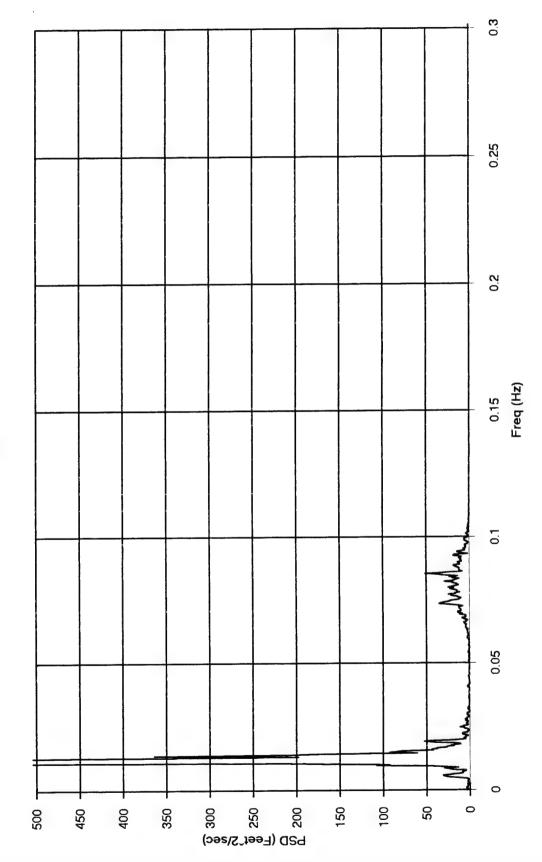
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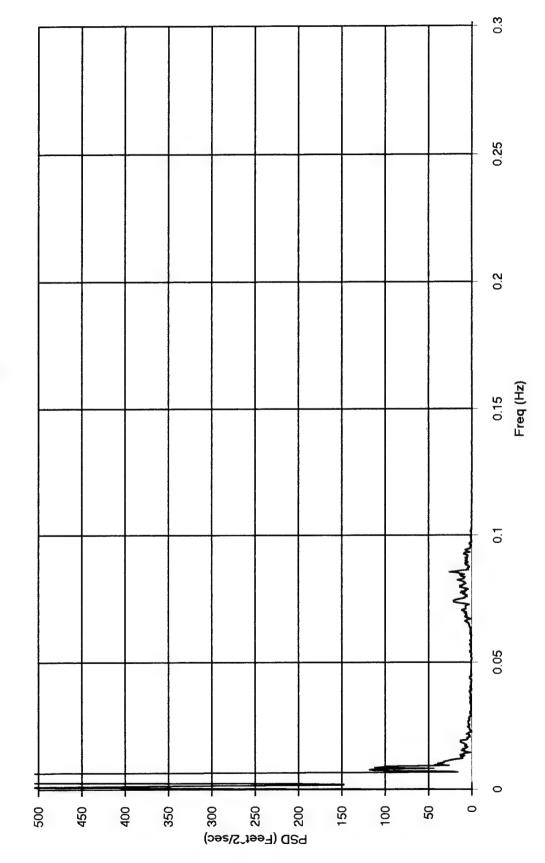


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Test A586 - HEAVE PSD

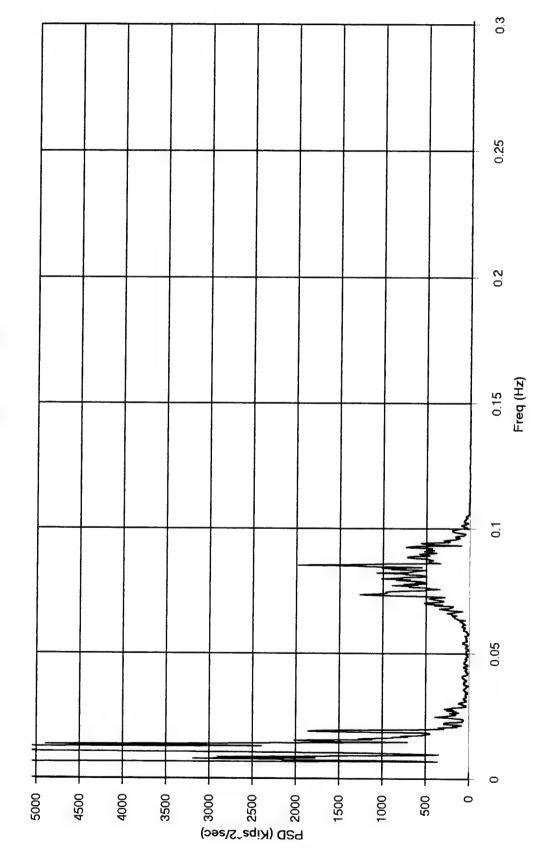


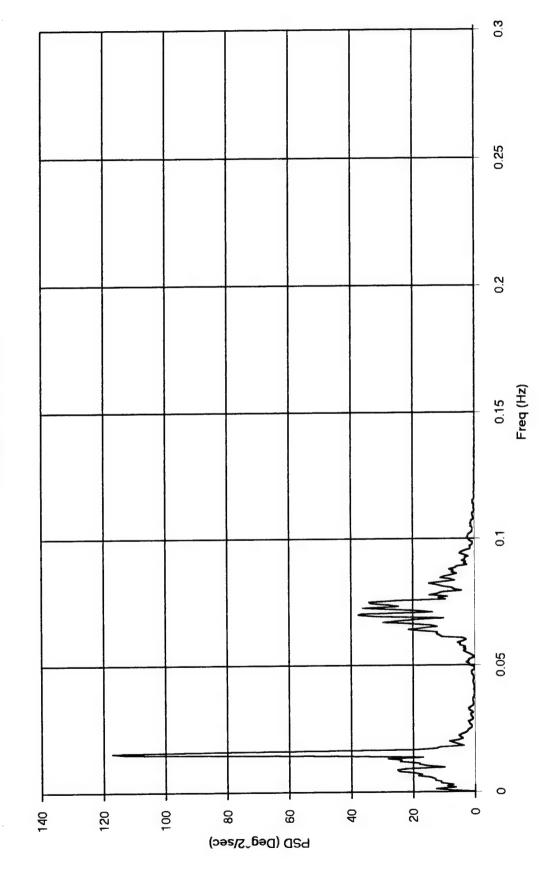
Test A586 - SURGE PSD



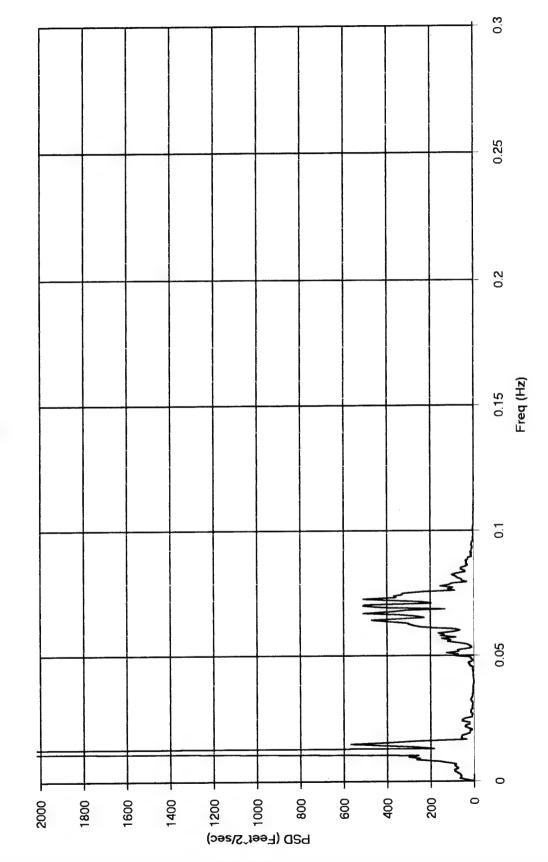
Page 1

Test A586 - ML-1 PSD



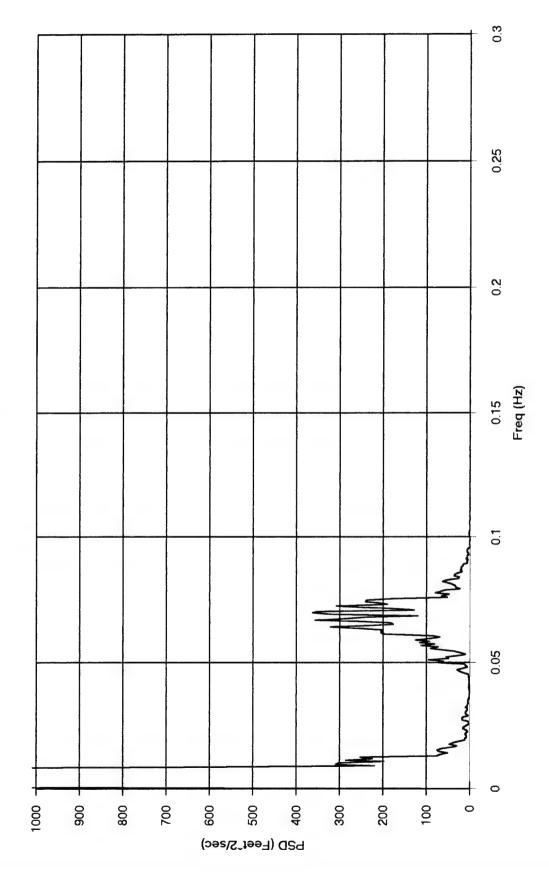


Test A587 - HEAVE PSD

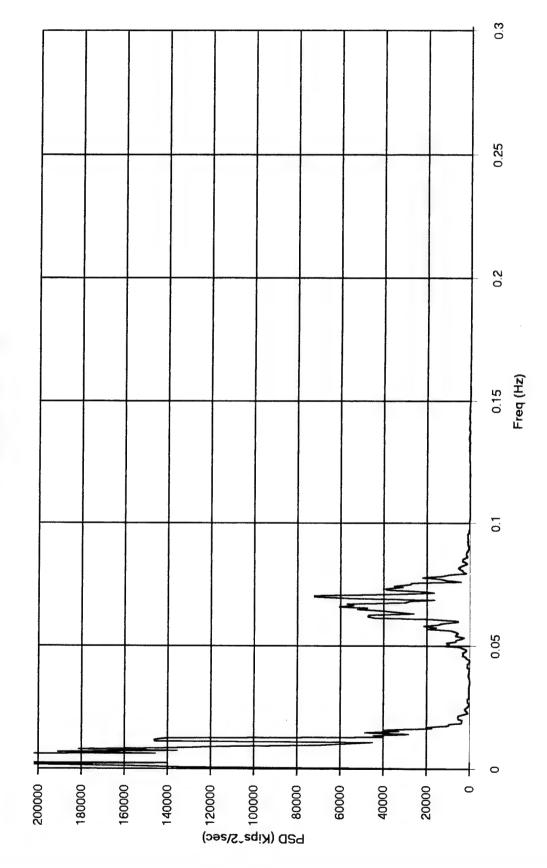


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Test A587 - SURGE PSD



Test A587 - ML·1 PSD



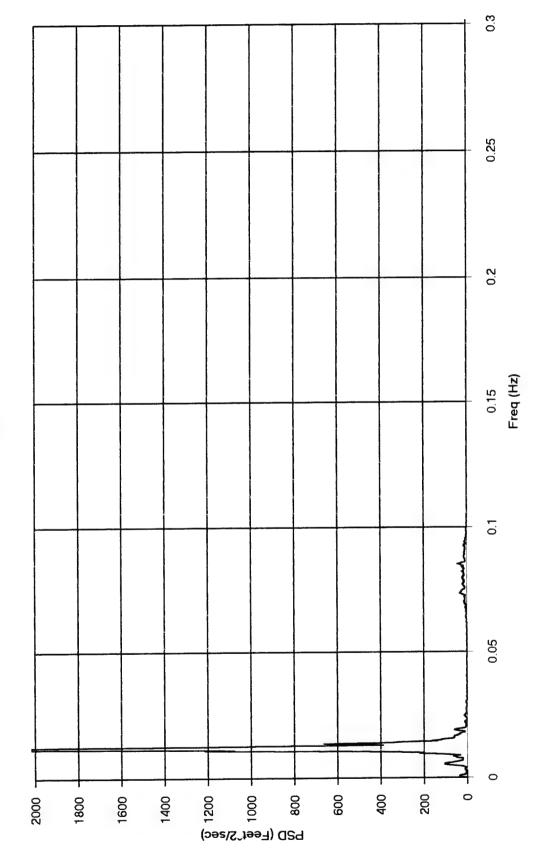
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0.25 Test A598 - PITCH PSD 0.15 Freq (Hz) 0.1 0.05 20 - 002 PSD (Deg^2/sec) 250

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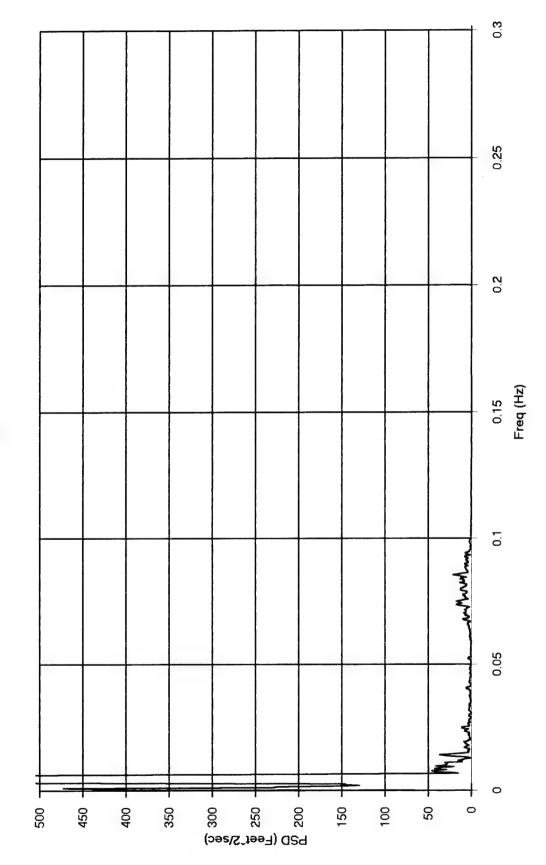
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Test A598 - HEAVE PSD



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Test A598 - SURGE PSD

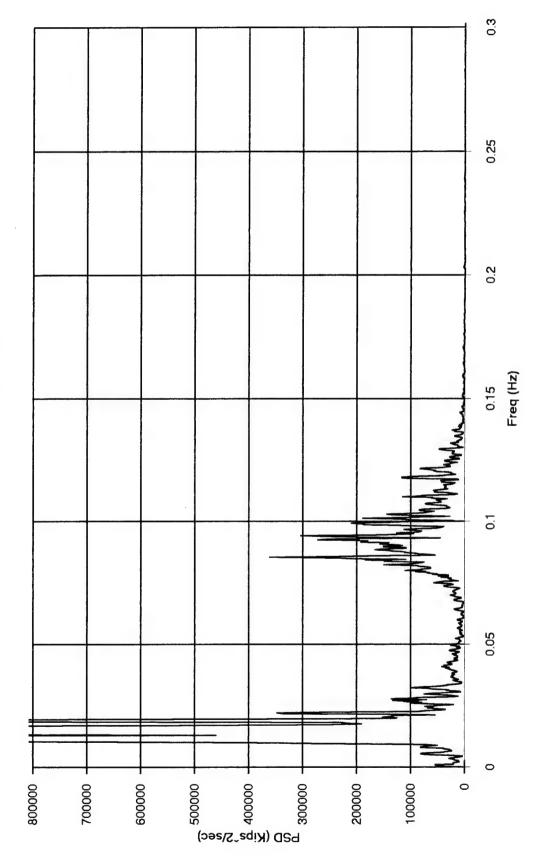


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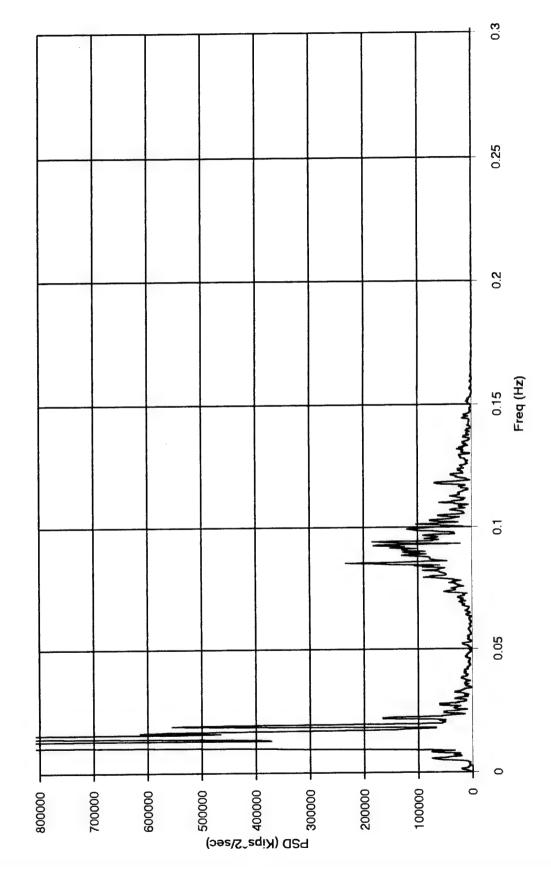
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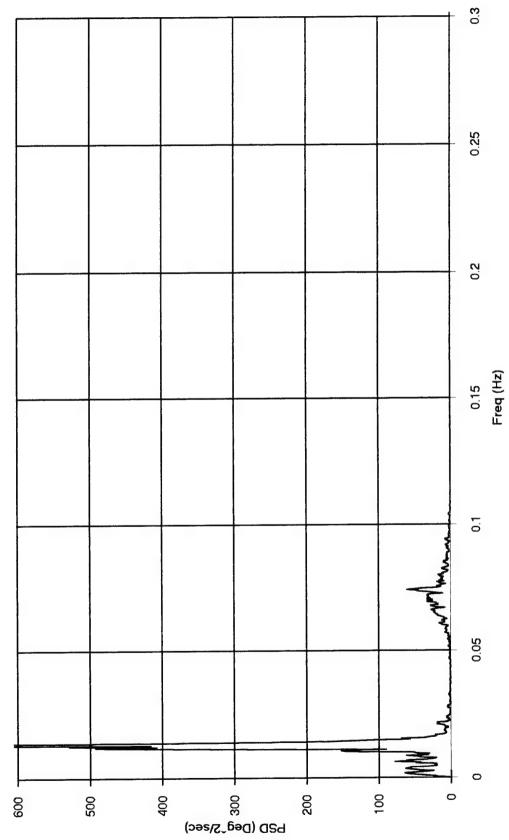
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0.3

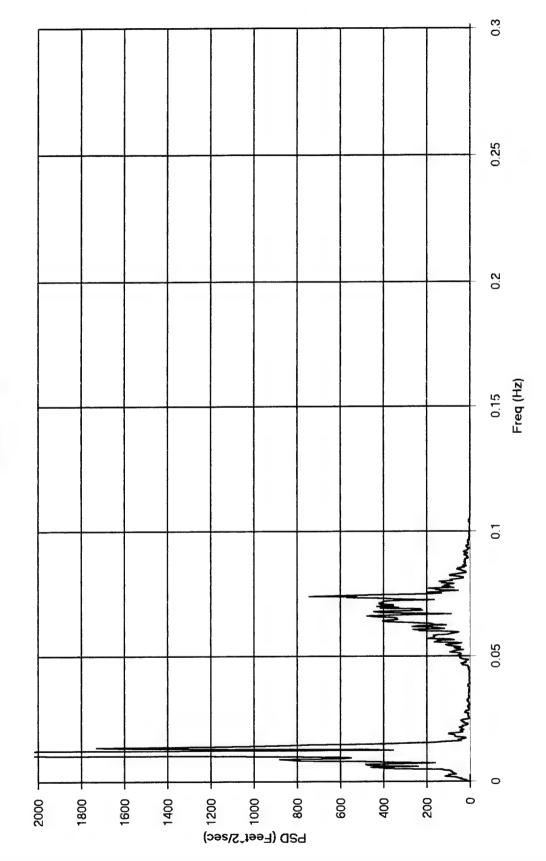


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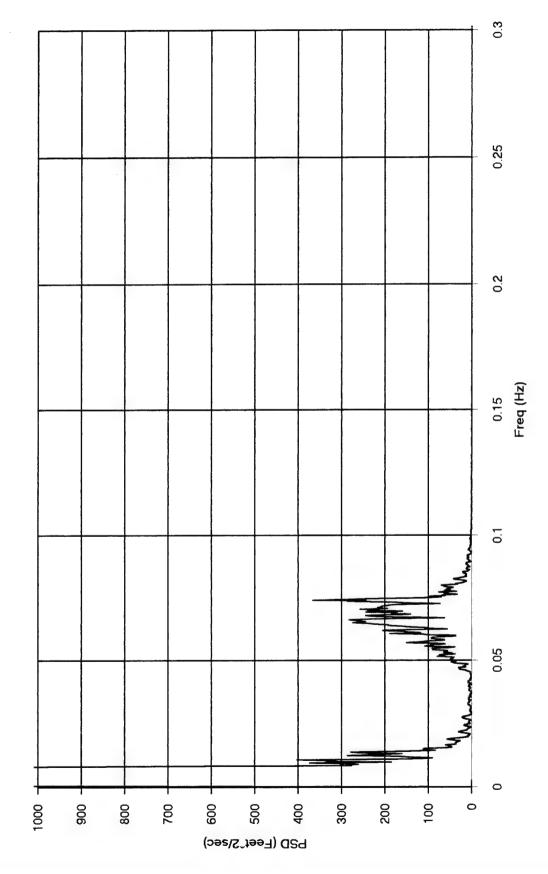




Test A599 - HEAVE PSD

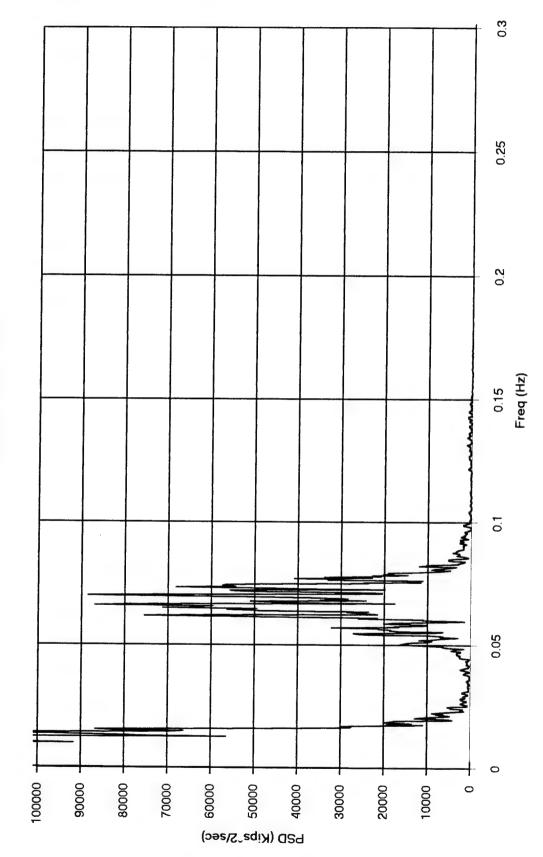


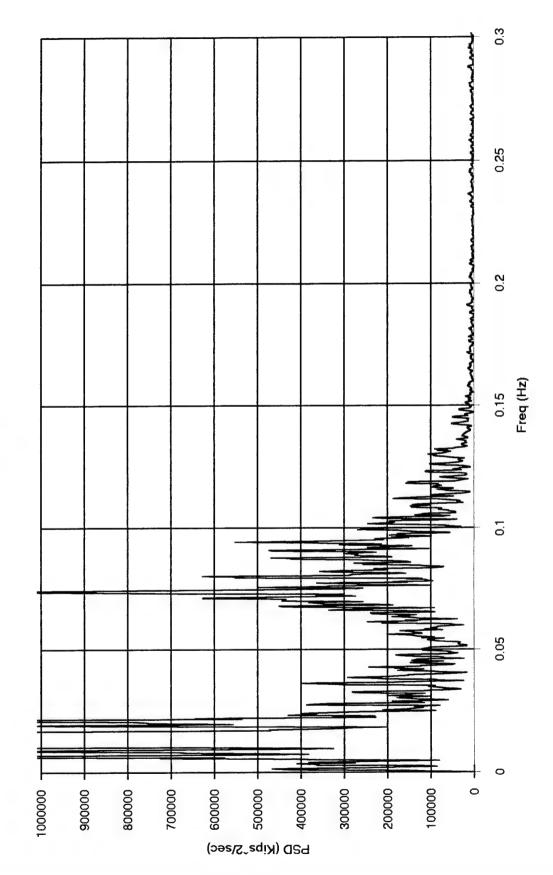
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Test A599 - ML-1 PSD





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Test A599 - BT-3 PSD

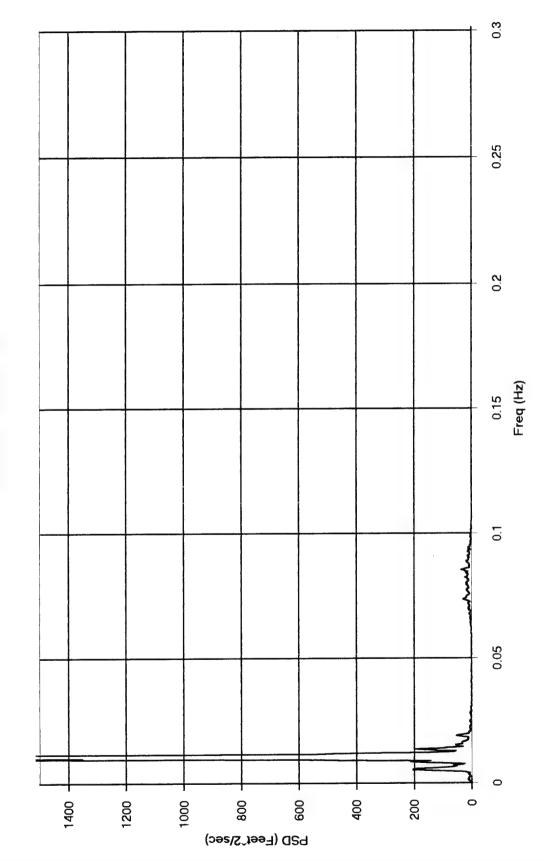
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0.3 0.25 0.2 0.15 Freq (Hz) 0.1 0.05 200 -PSD (Deg^2/sec) 20 250

Test A608 · PITCH PSD

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Test A608 - HEAVE PSD

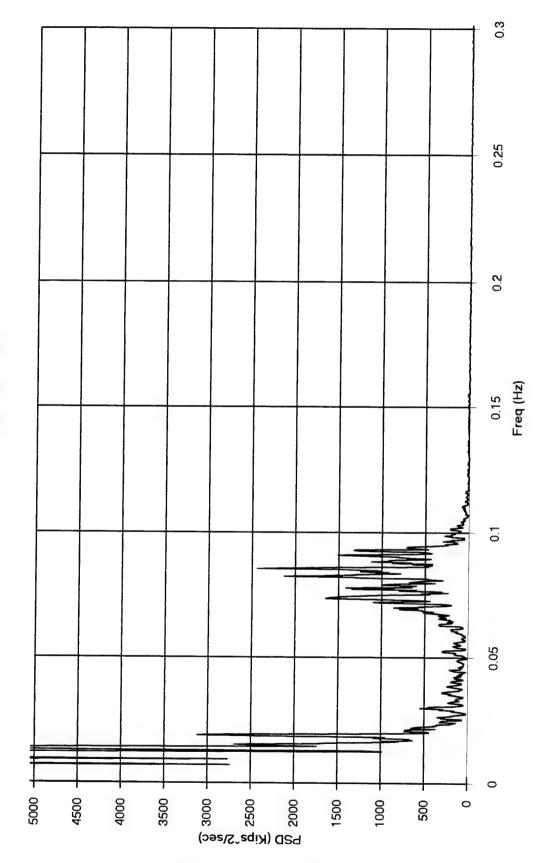


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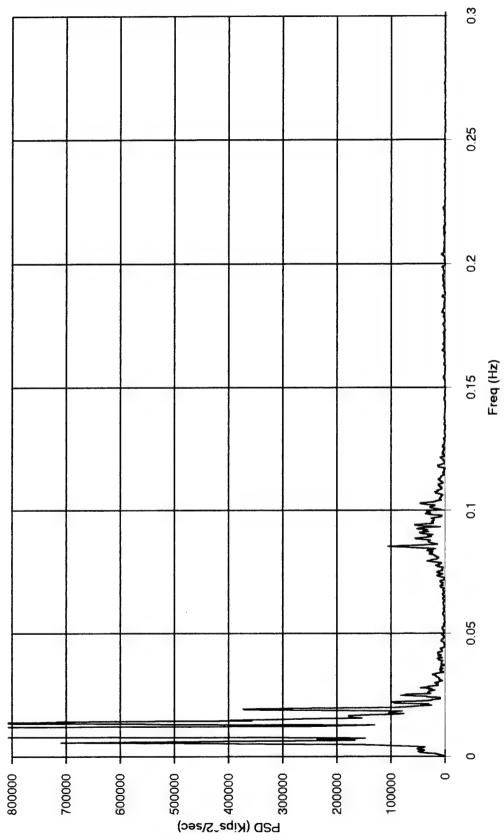
0.3 0.25 0.2 Test A608 - SURGE PSD 0.15 Freq (Hz) 0.1 0.05 0 200 20 PSD (Feet^2/sec) 100 0 450 400 350 150

Page 1

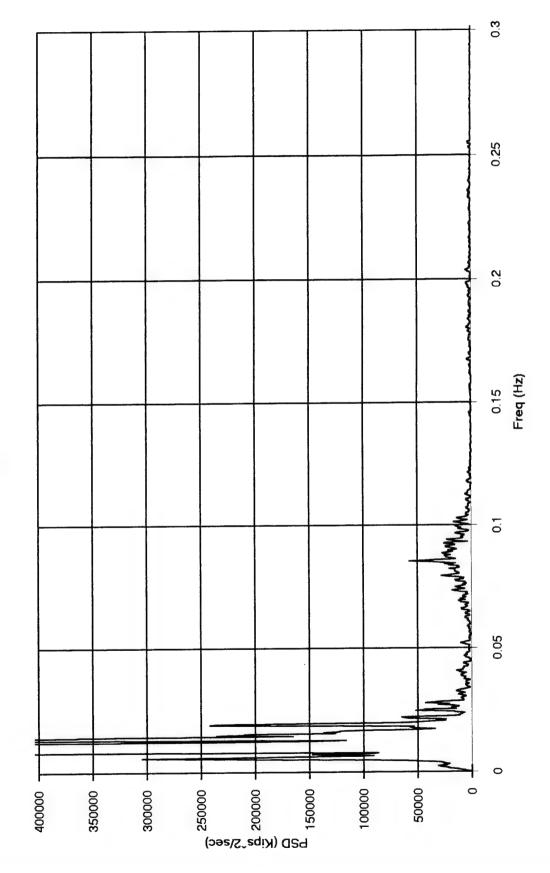
Test A608- ML-1 PSD



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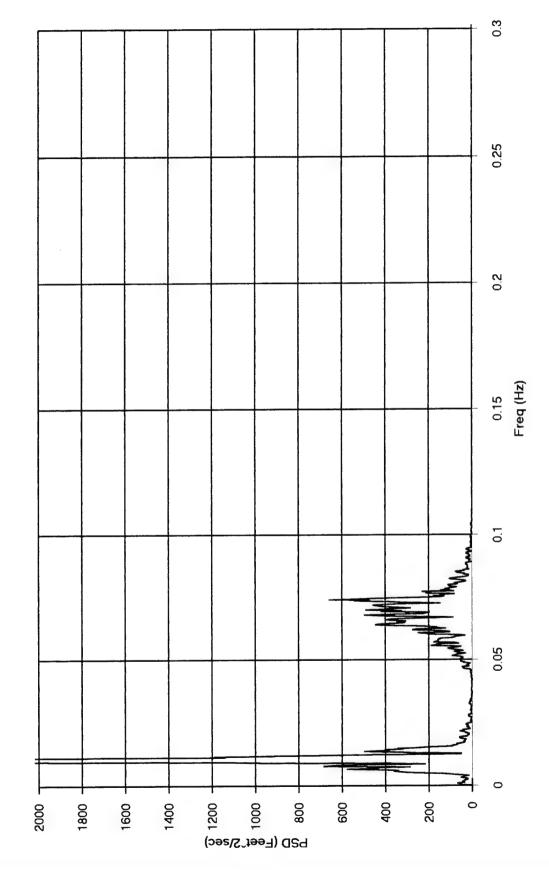


0.3 0.25 0.2 0.15 Freq (Hz) 0.1 0.05 200 PSD (Deg^2/sec) 200 100 400 900

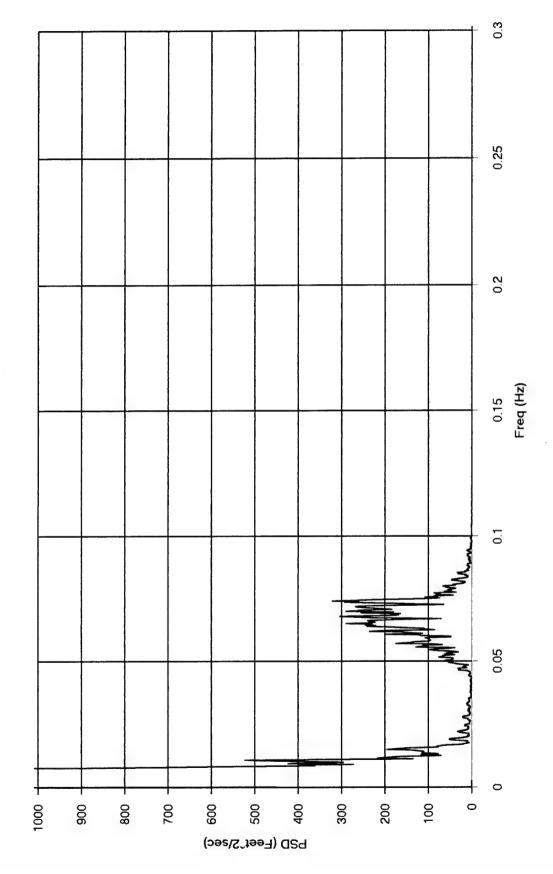
Test A609 - PITCH PSD

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Test A609 - HEAVE PSD

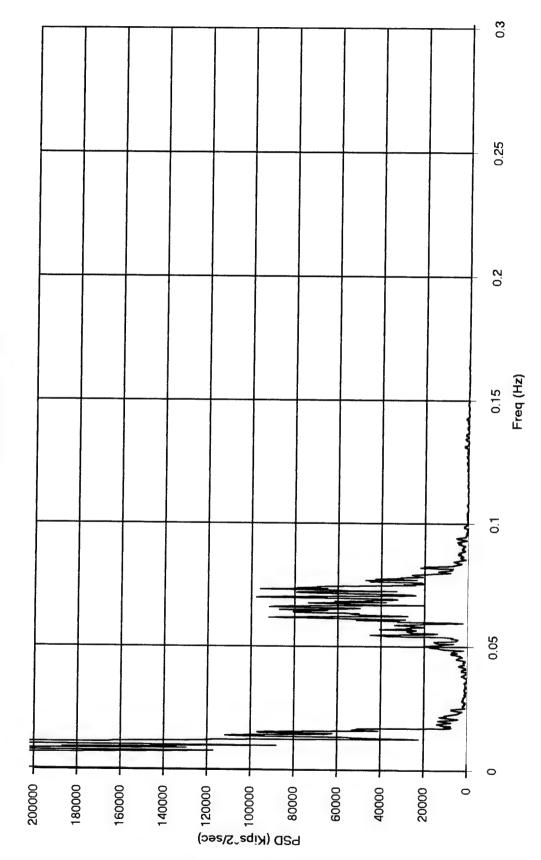


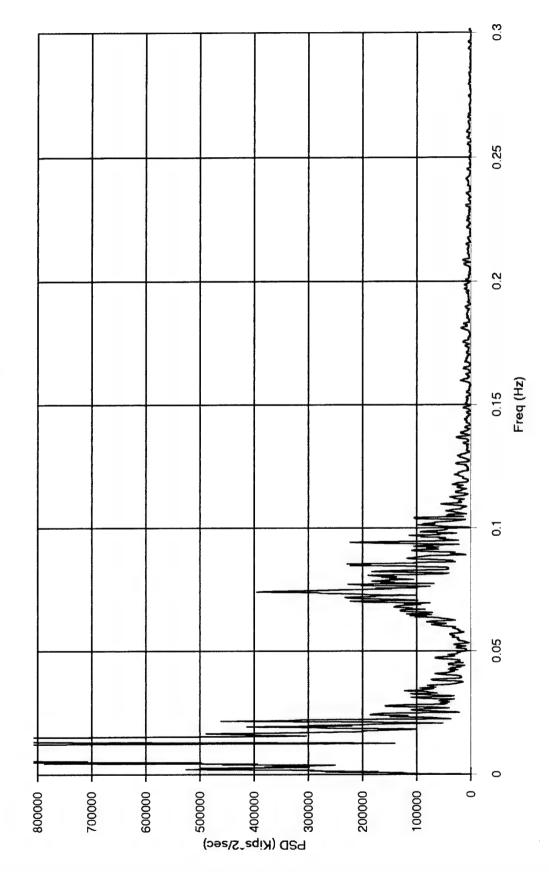
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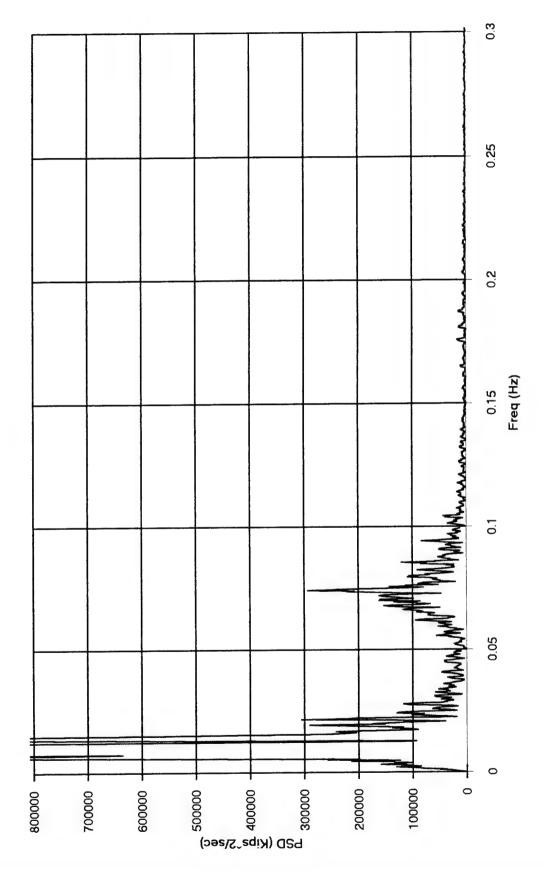
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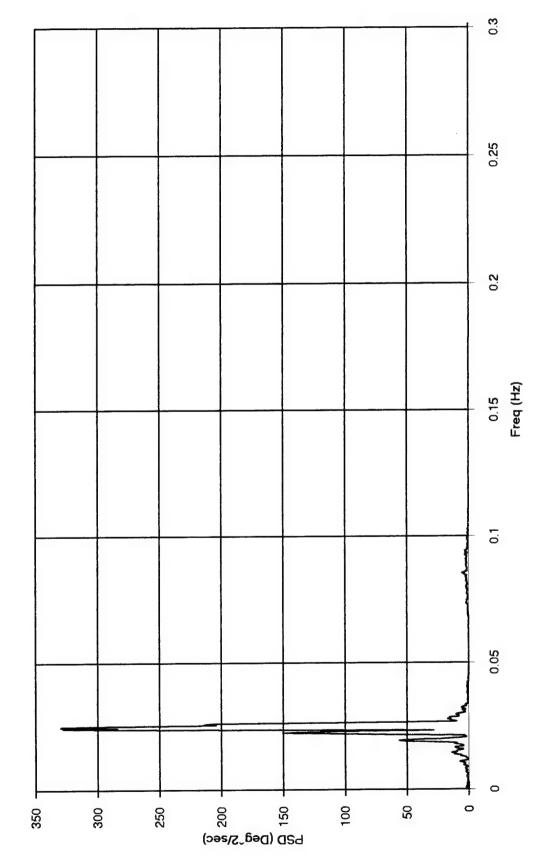
Test A609 - ML-1 PSD



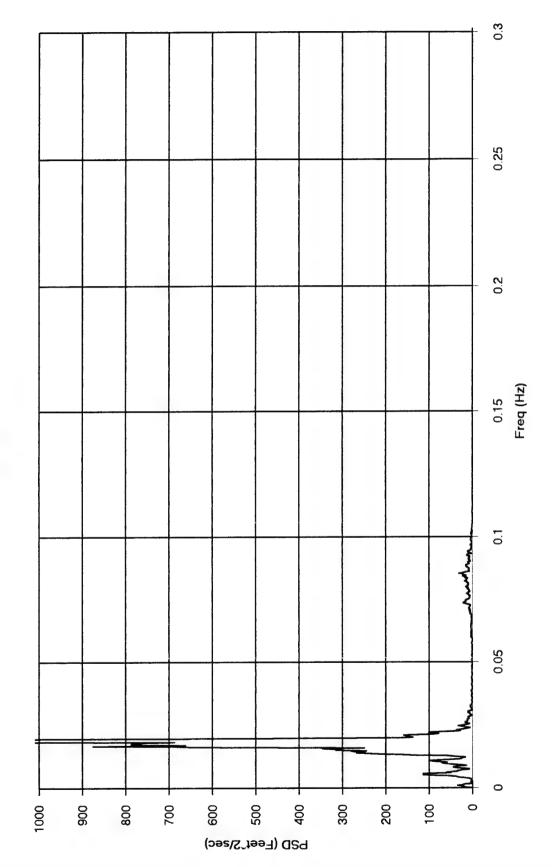


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Test A708 - HEAVE PSD

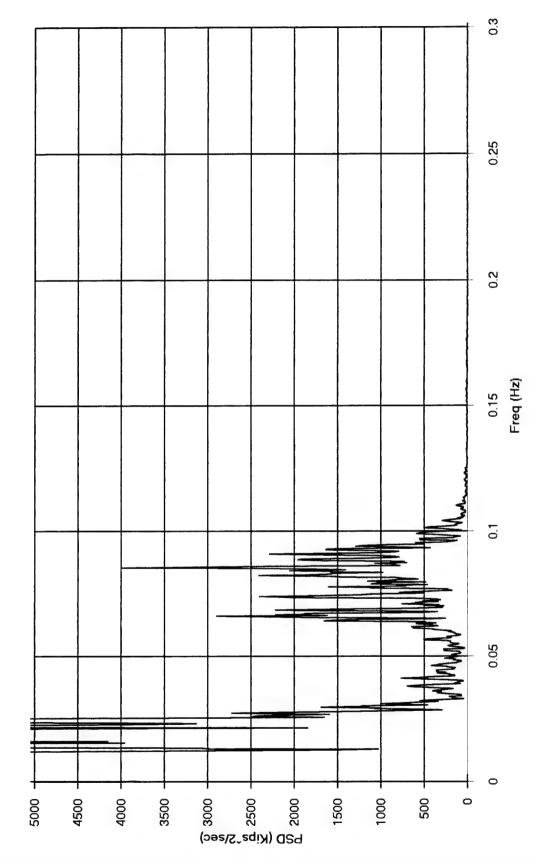


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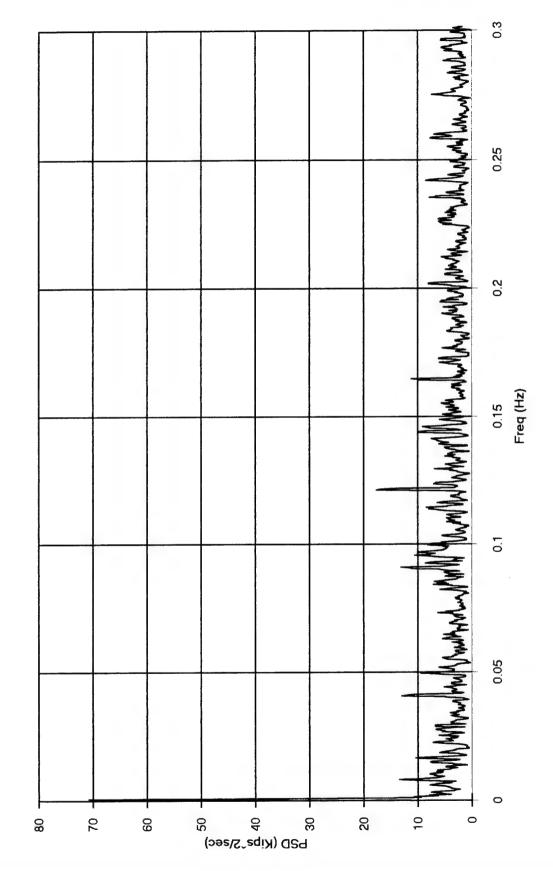
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Test A708 - SURGE PSD

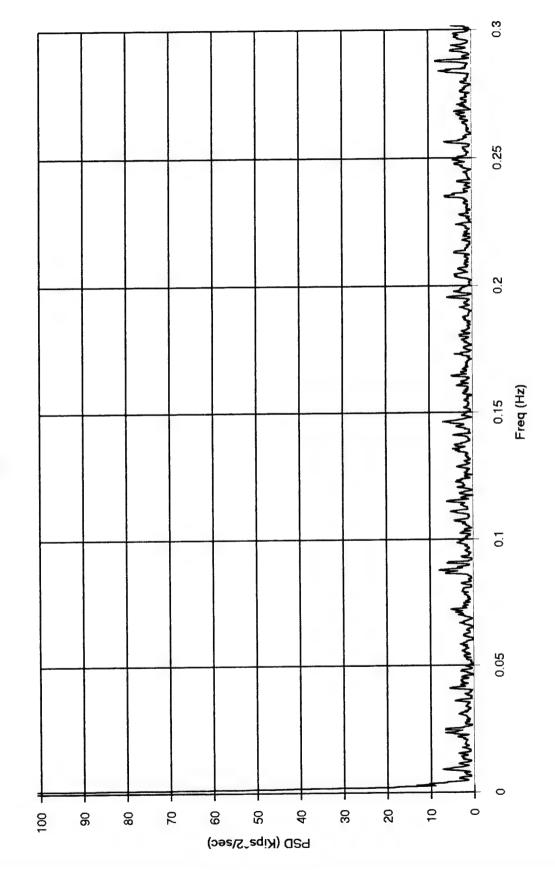
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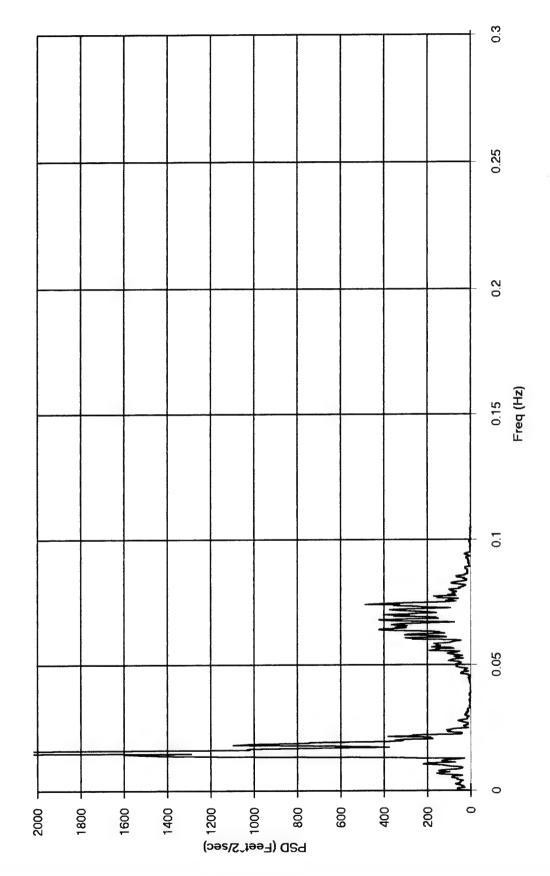


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Test A709- PITCH PSD

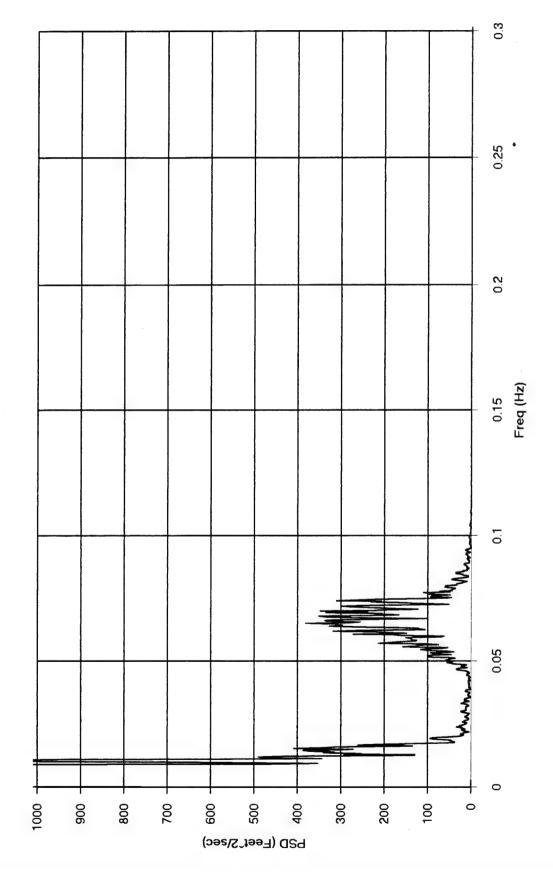
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Test A709 - HEAVE PSD



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Test A709 - SURGE PSD

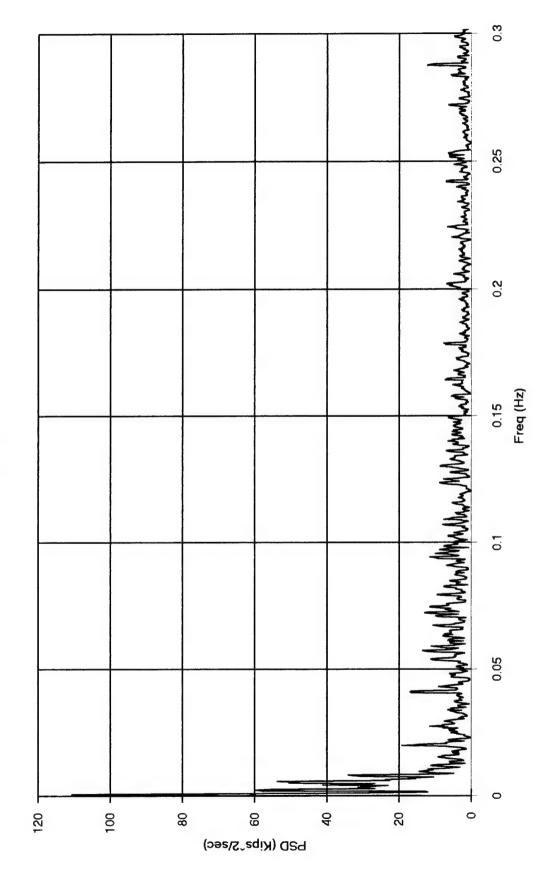


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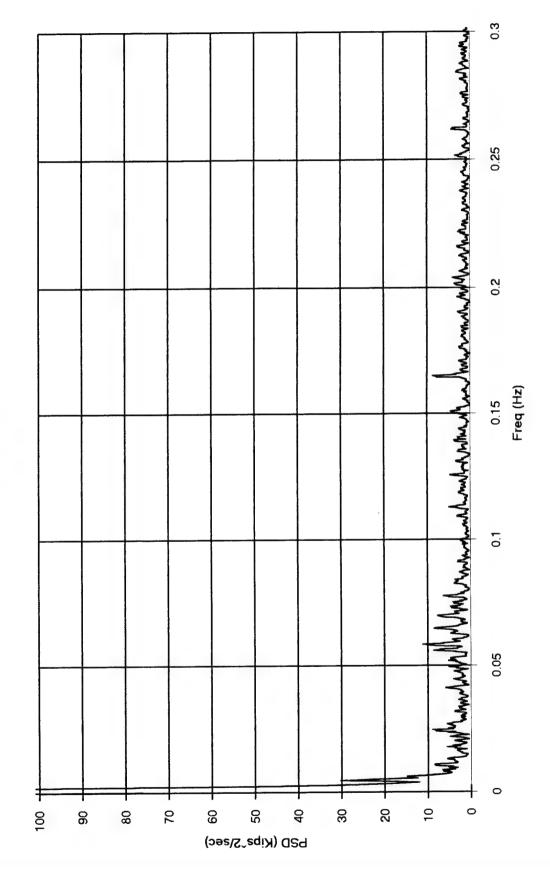
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Page 1

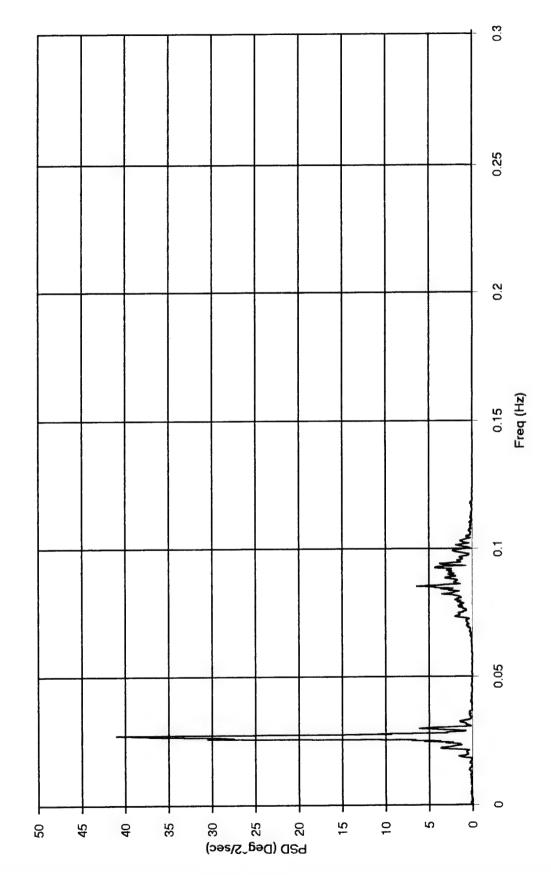
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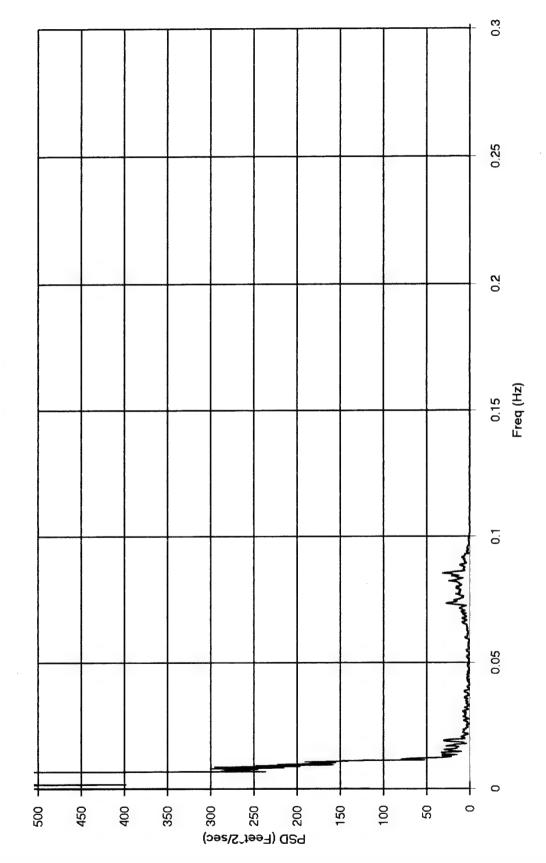
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0.3 0.25 0.2 0.15 Freq (Hz) 0.1 0.05 0 PSD (Feet 2/sec) 20 100 450 400 350 150 200

Test A808 - HEAVE PSD

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Test A808 - SURGE PSD



Page 1

0.3 0.25 0.2 0.15 Freq (Hz) 0.05 0 20000 + 2000 PSD (Kips^2/sec) 18000 16000 14000 0009 4000 0

Test A808 - ML-1 PSD

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0.25

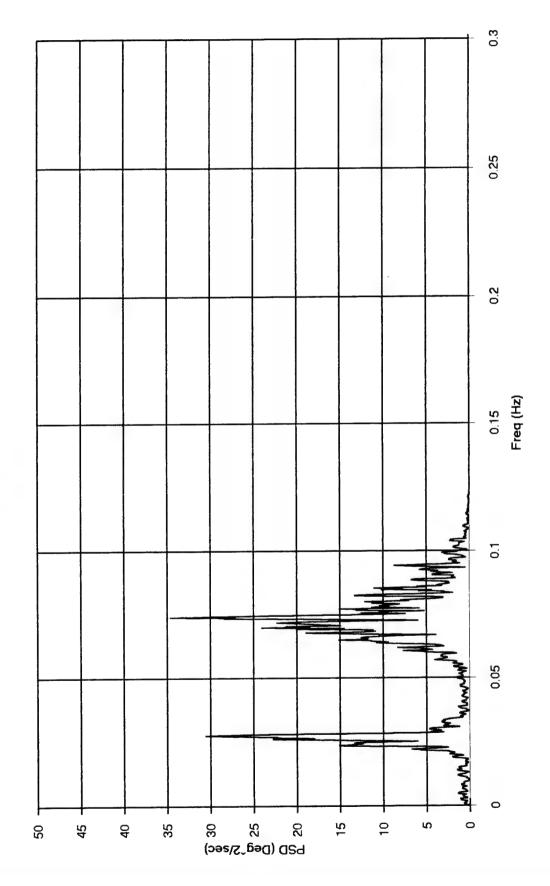
0.15 Freq (Hz)

0.1

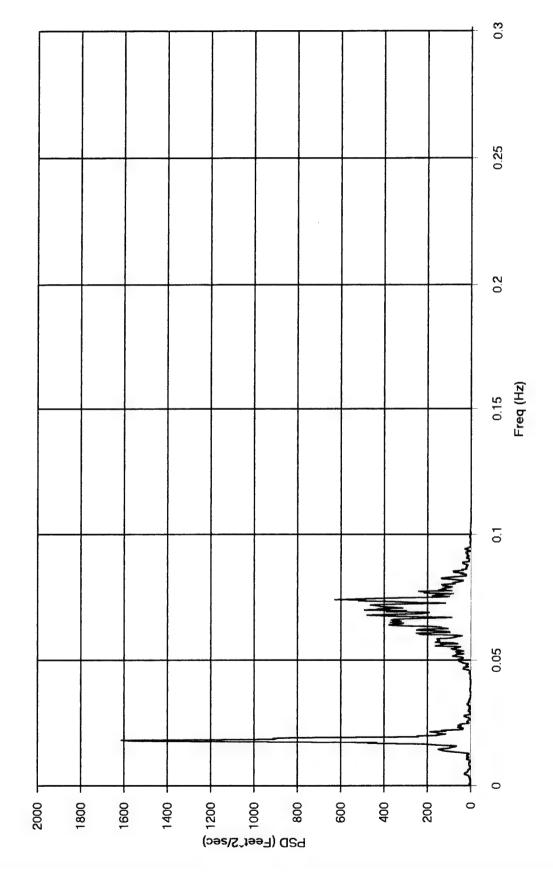
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Test A808 - BT-3 PSD

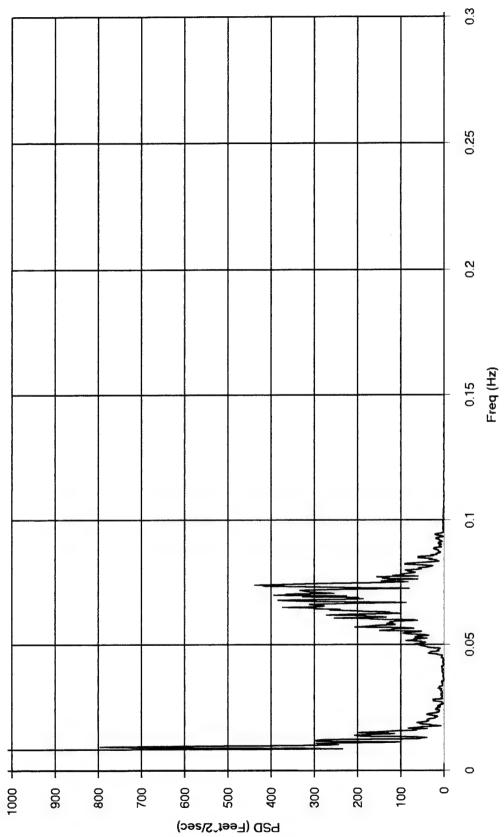
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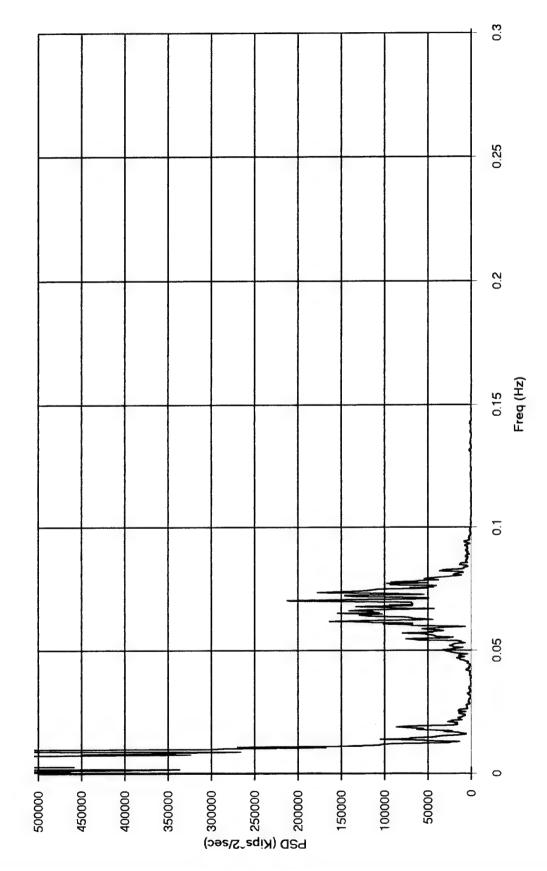
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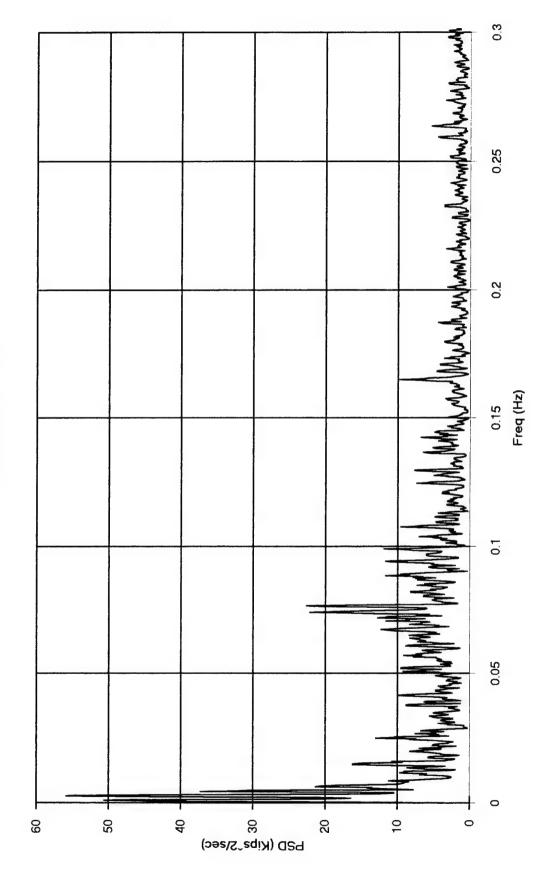
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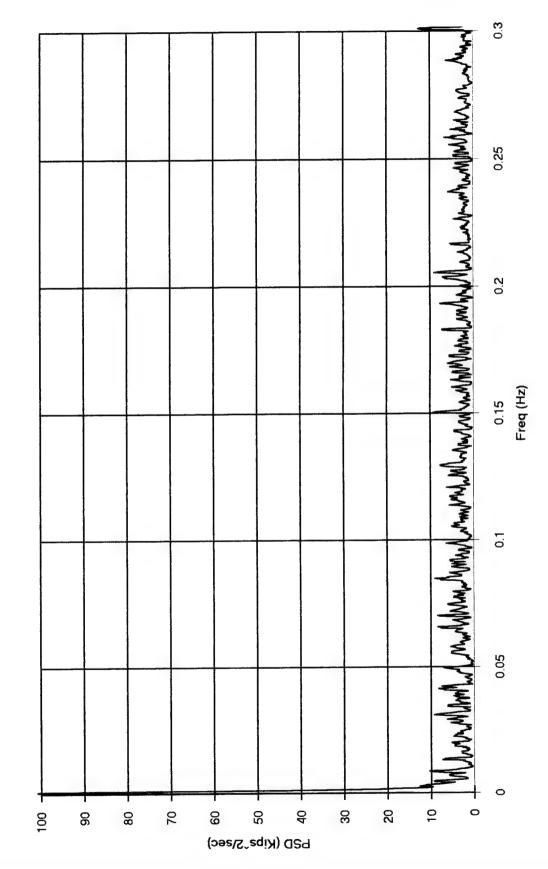
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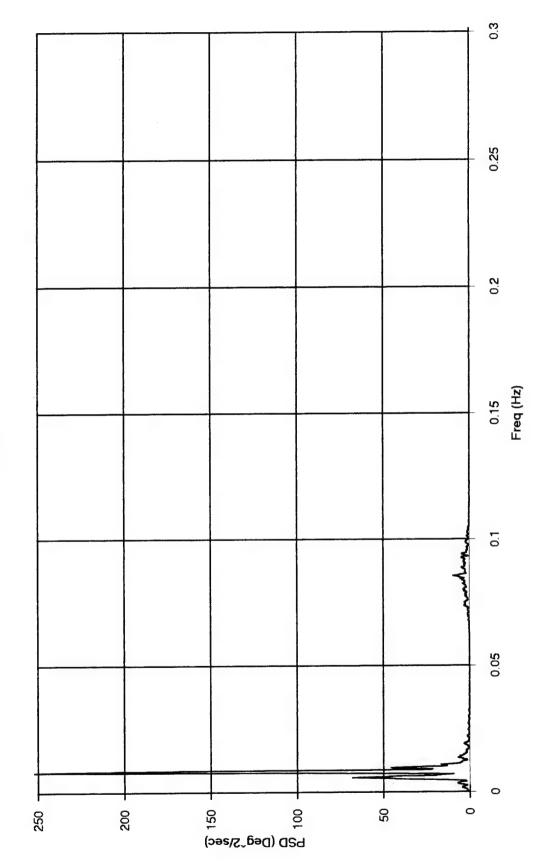


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Test A908 - PITCH PSD



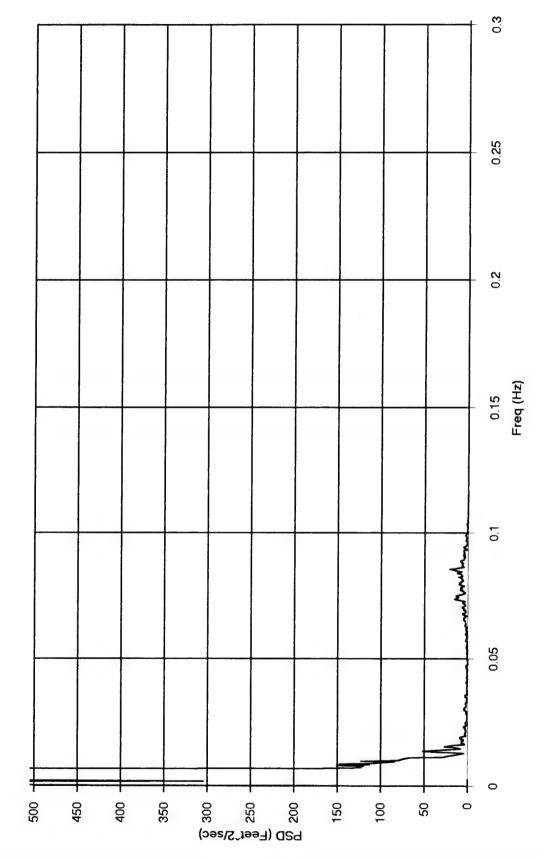
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Test A908 - HEAVE PSD

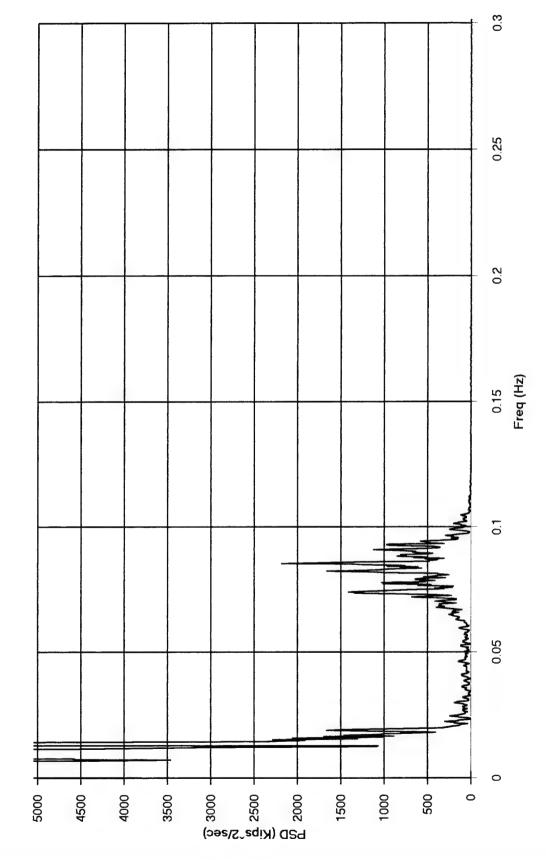
0.25 0.2 0.15 Freq (Hz) 0.1 0.05 200 450 400 PSD (Feet 2/sec) 350 100 20 150 0

Page 1

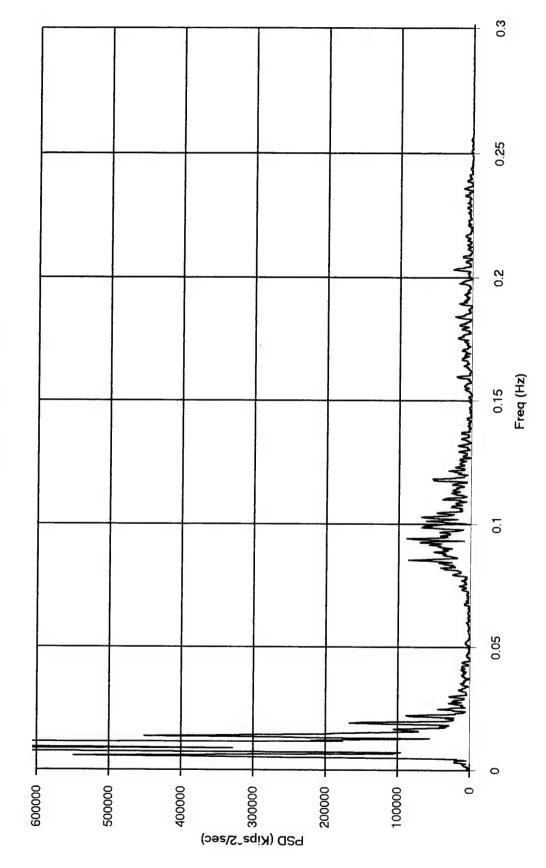
Test A908 - SURGE PSD



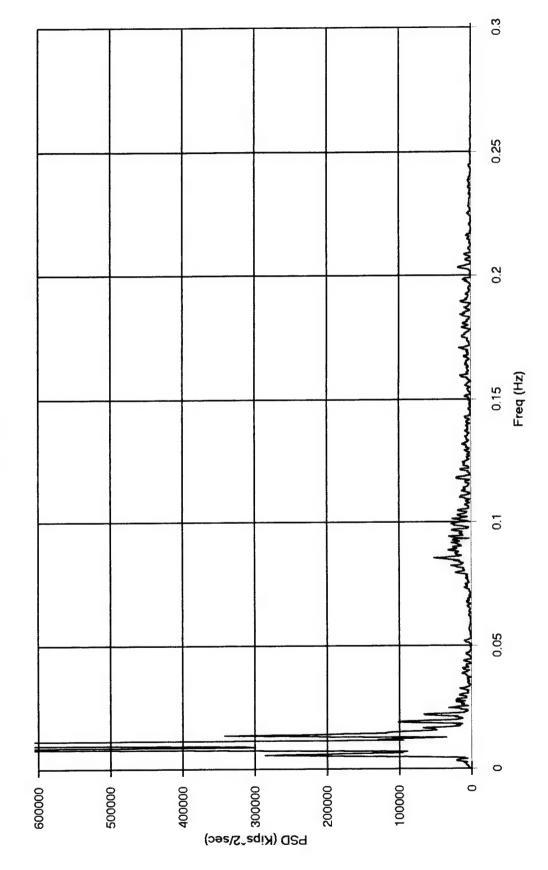
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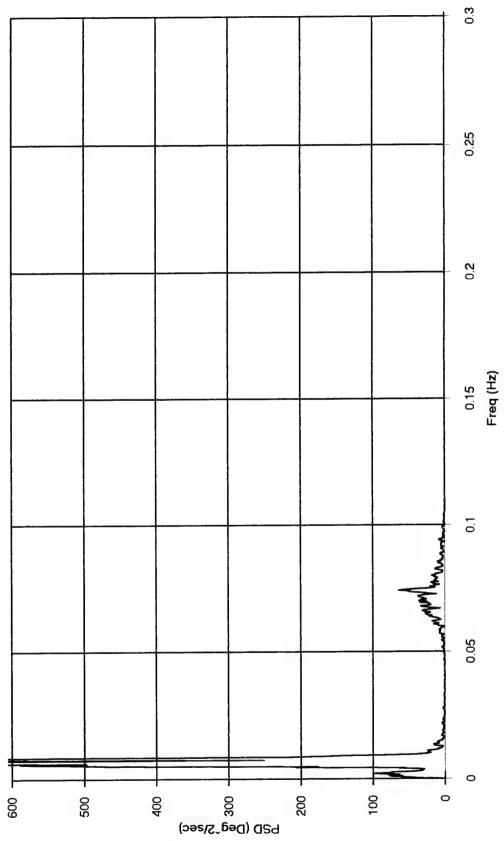
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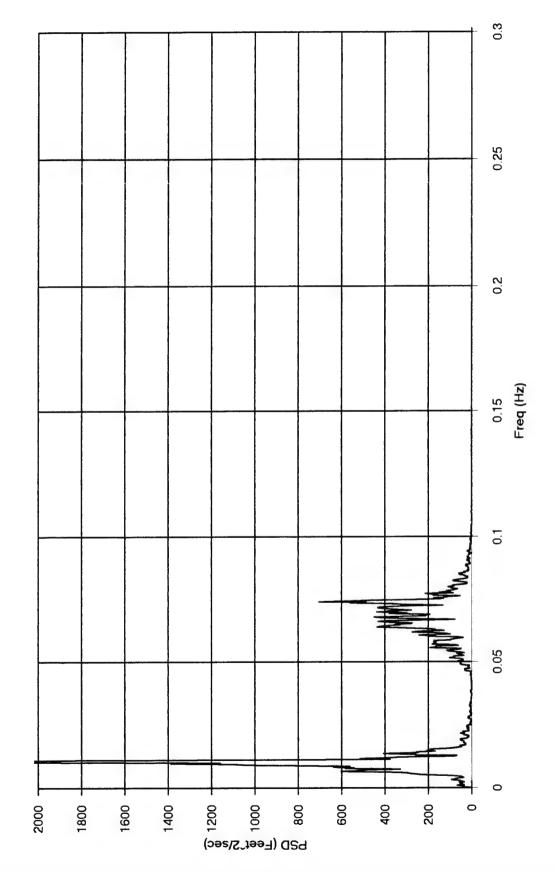
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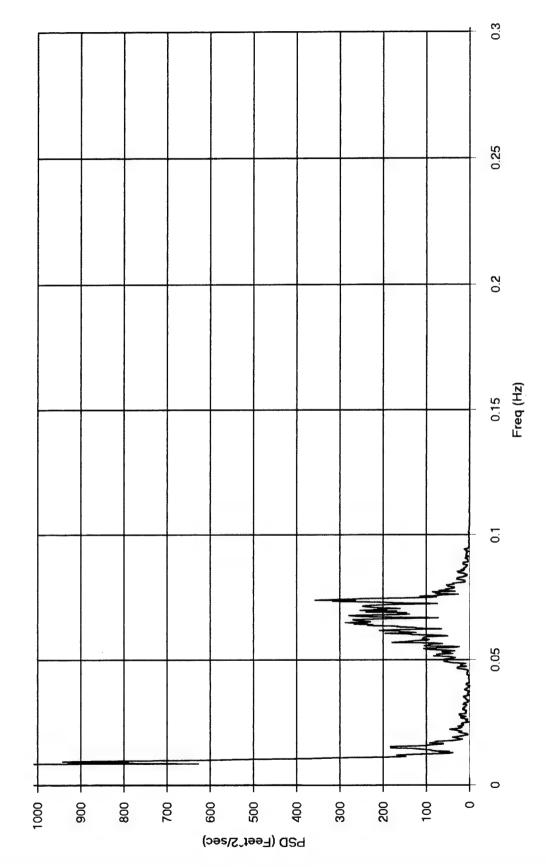
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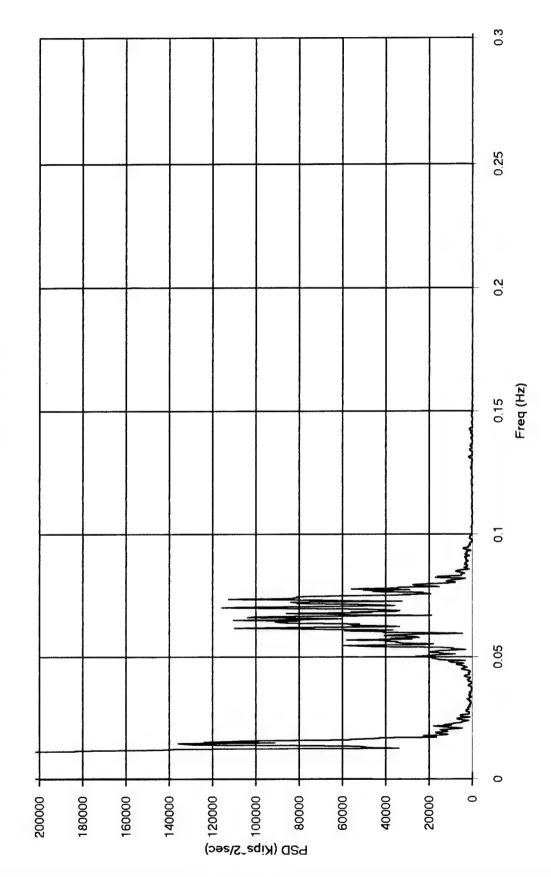
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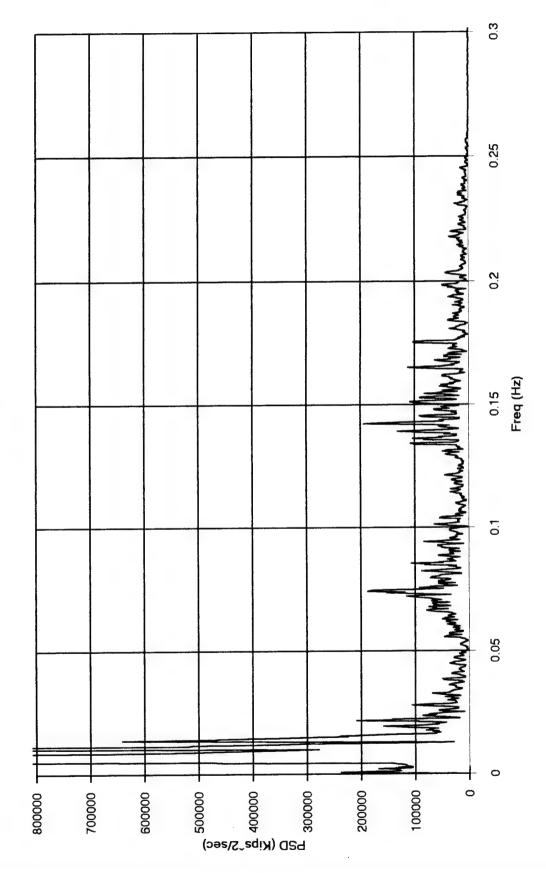


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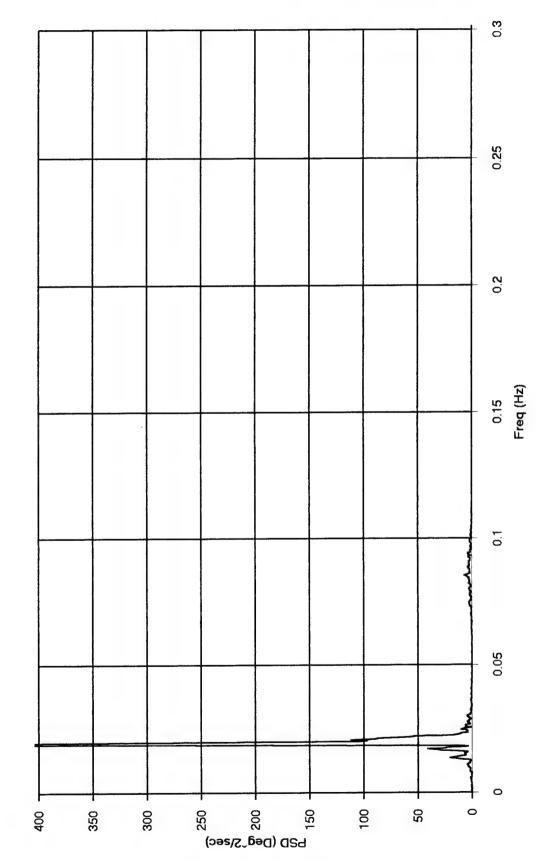
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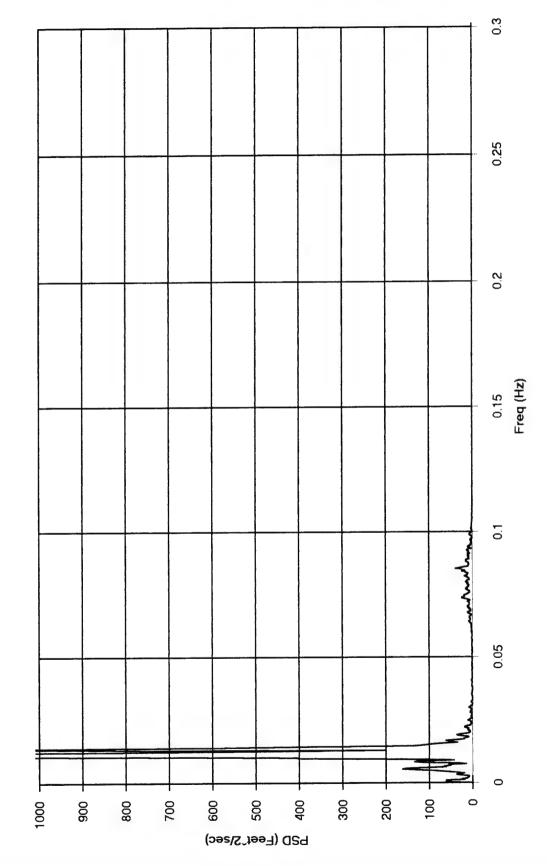
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Test A1008 - PITCH PSD



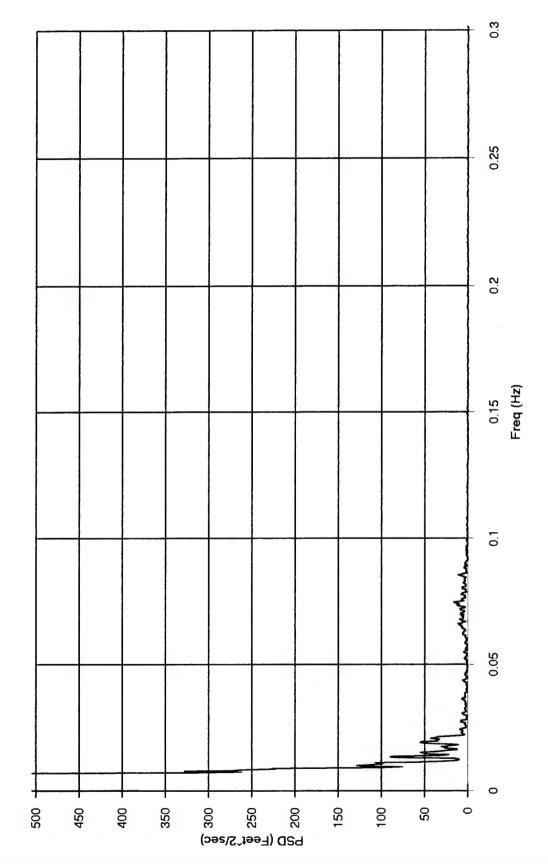
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Test A1008 - HEAVE PSD

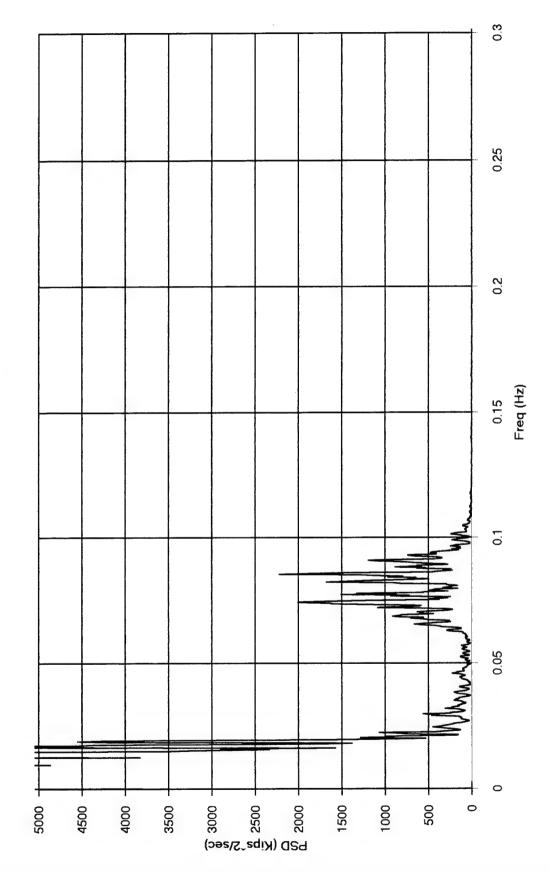


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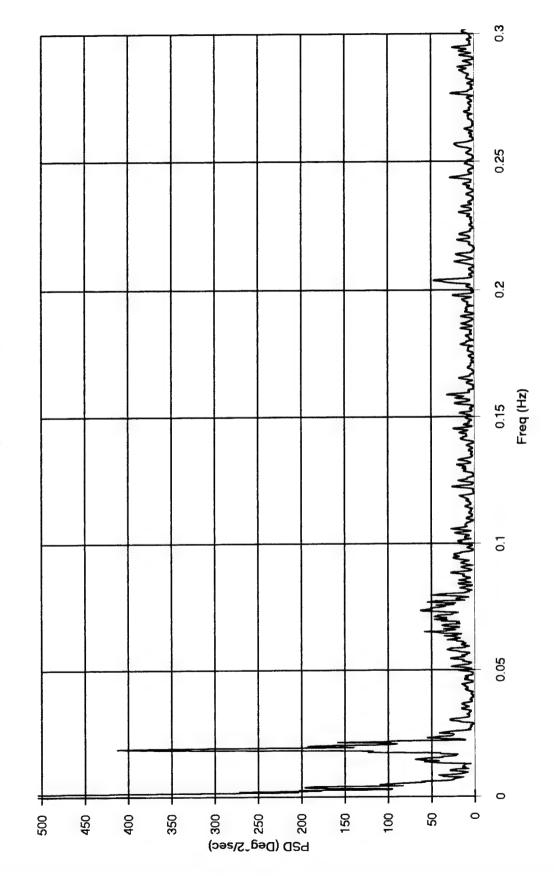
Test A1008 - SURGE PSD



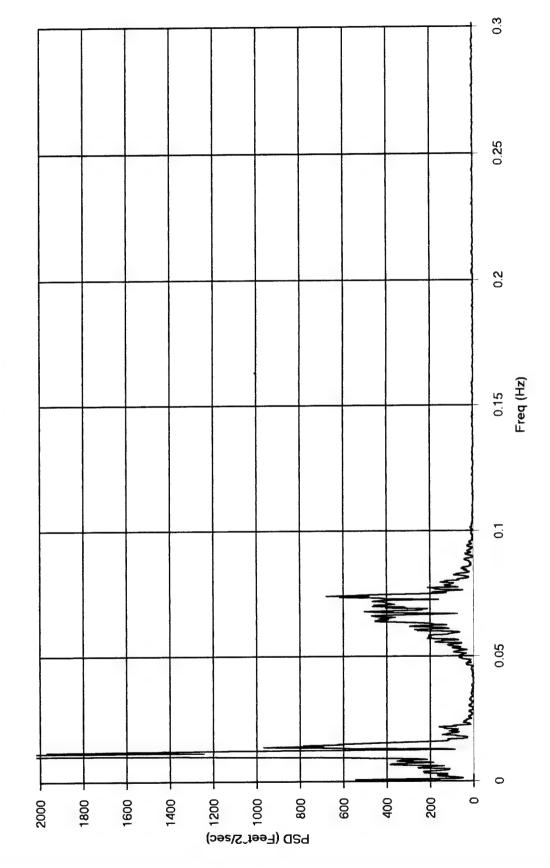
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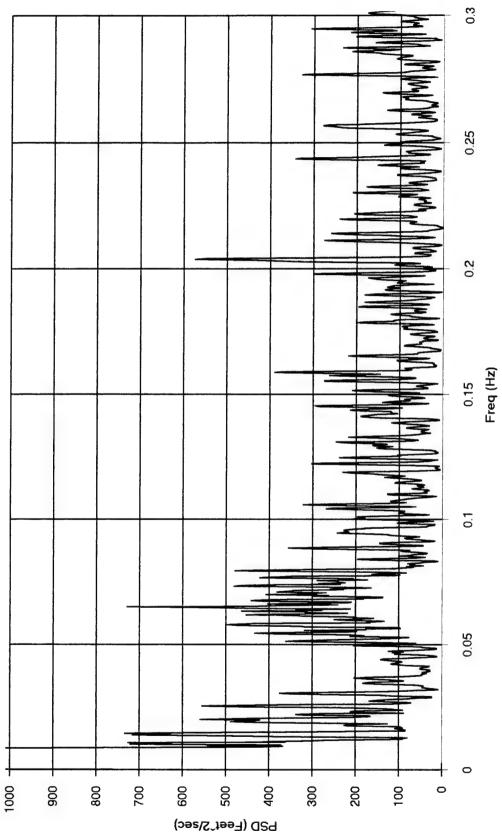
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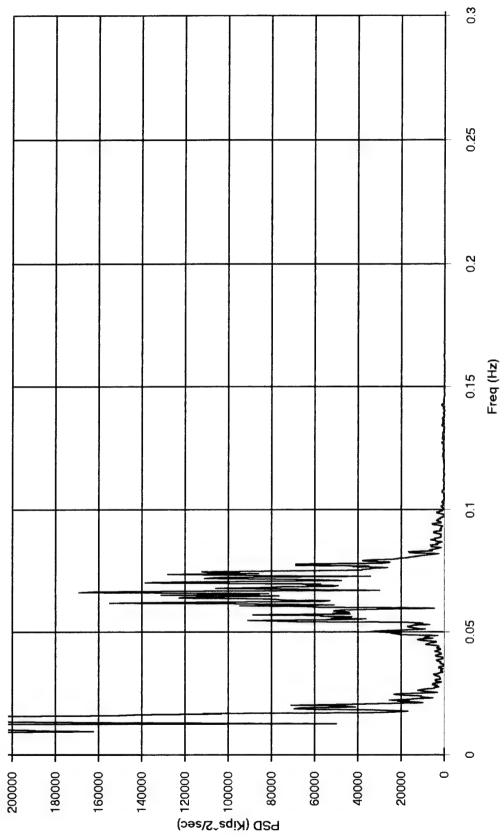


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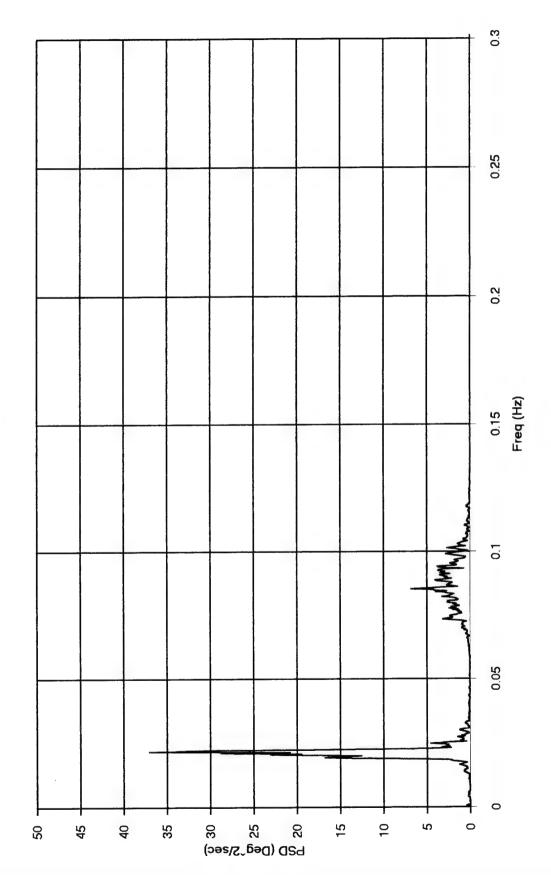


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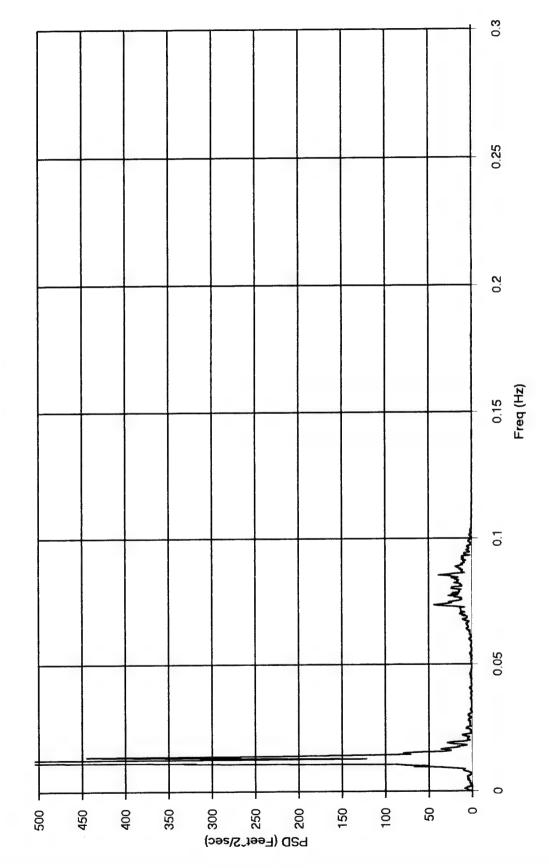




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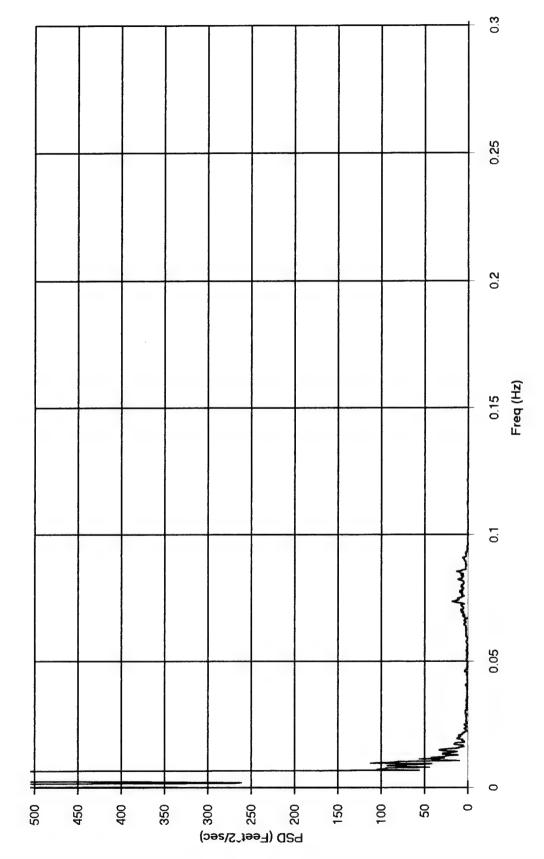


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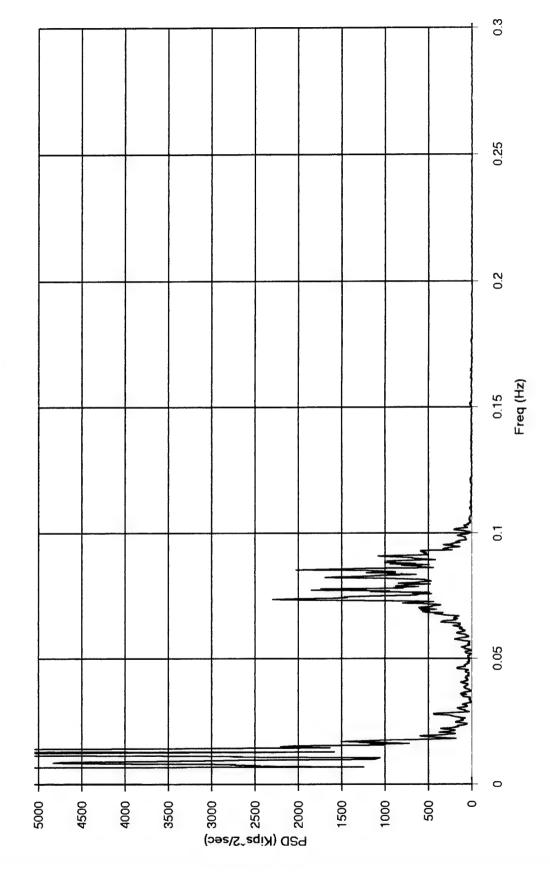


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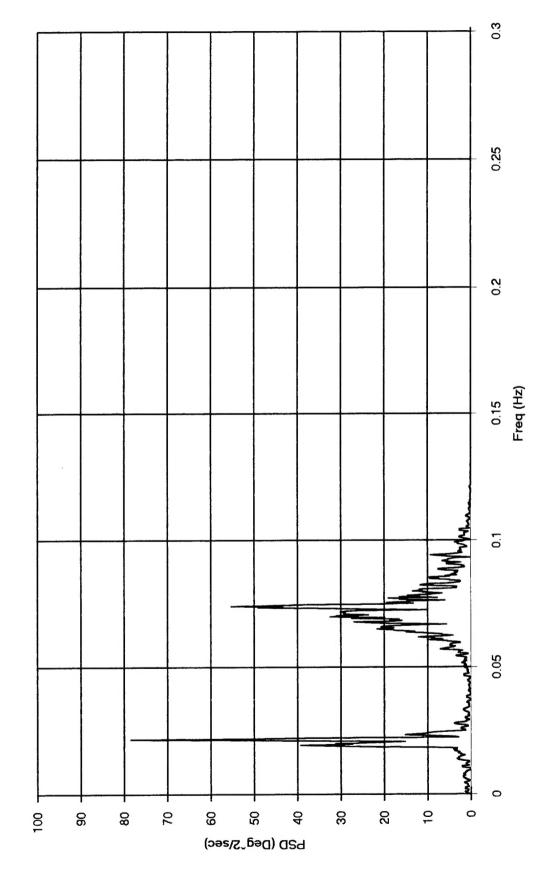
Test A1108 - SURGE PSD



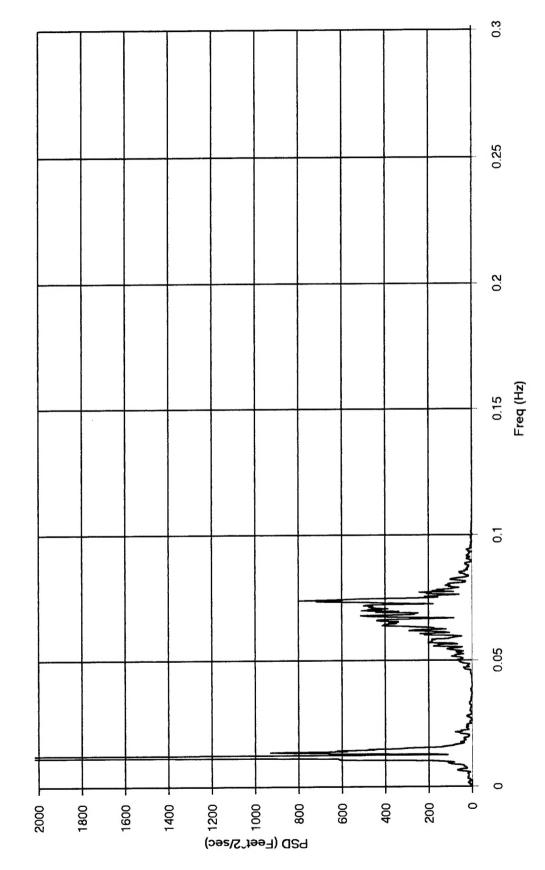
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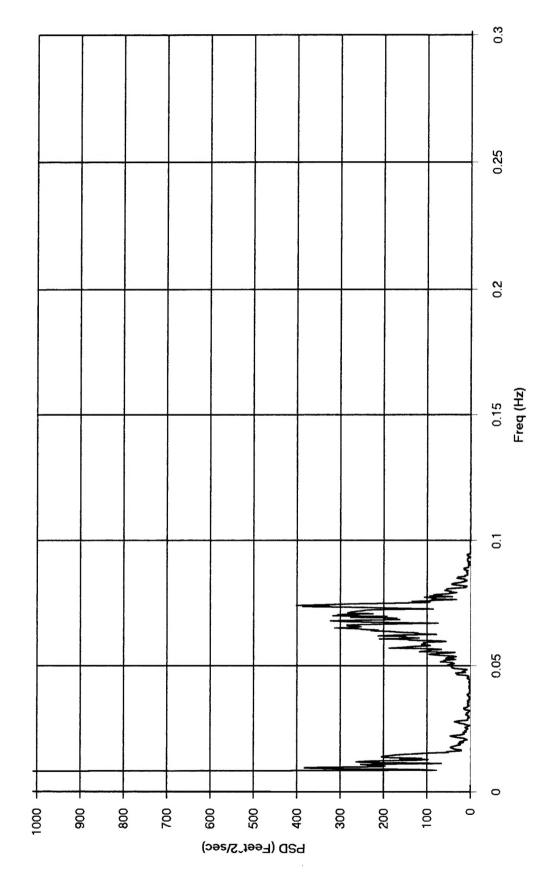
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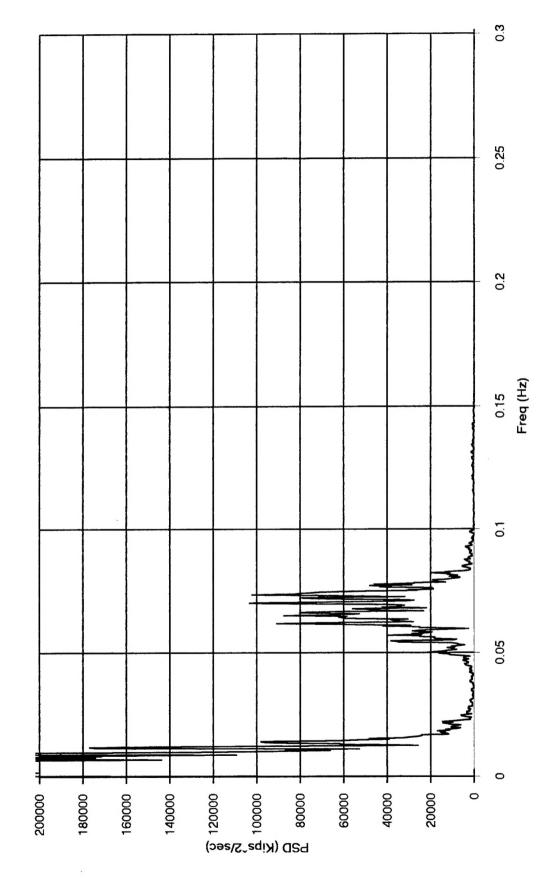
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